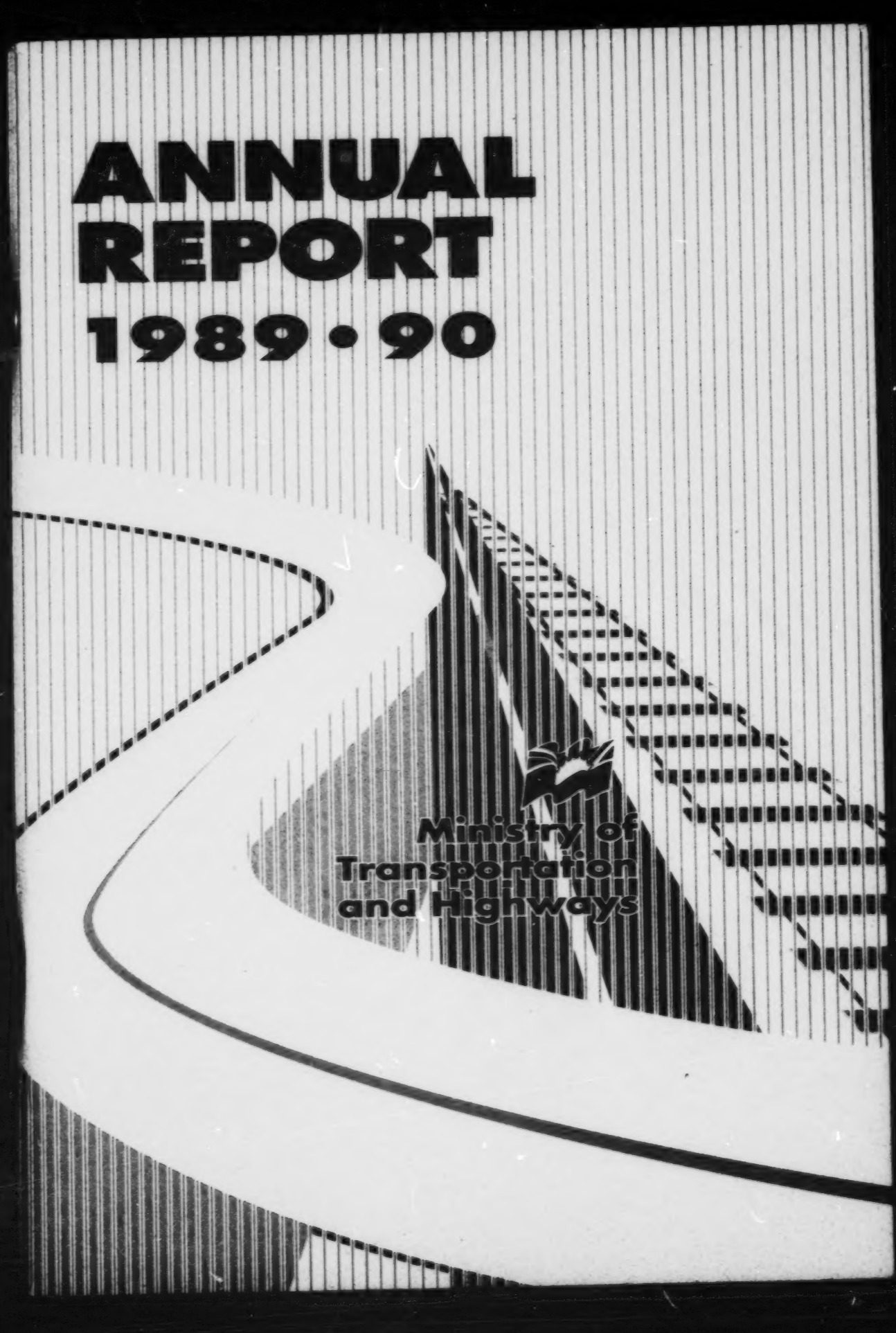
ANNUAL REPORT 1989-90



Ministry of Transportation and Highways

91-06087/

MINISTER'S MESSAGE

To the Honourable David C. Lam,
Lieutenant Governor of the
Province of British Columbia.

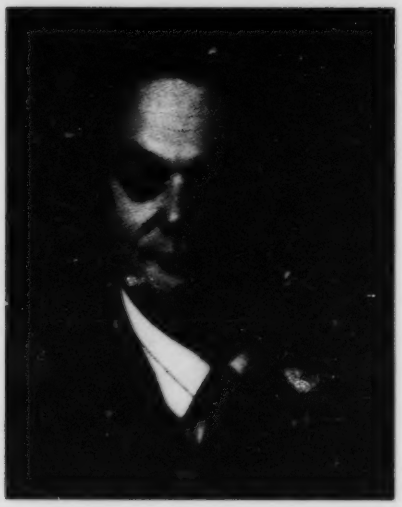
May It Please Your Honour:

I am pleased to submit the Annual Report of the Ministry of Transportation and Highways for the period of April 1, 1989 to March 31, 1990.

This report reflects our commitment to work with the public so that we may provide the people of British Columbia with a safe, efficient and environmentally-friendly, multi-modal transportation network that serves their needs today and into the future.

Honourable Lyall Hanson

Minister of
Transportation and Highways



Vince Collins

Deputy Minister

The Honourable Lyall Hanson
Minister of Transportation and Highways.
Parliament Buildings.
Victoria, B.C.

Sir:

We have the honour to submit the Annual Report for the fiscal period ending March 31, 1990.

Repectfully submitted,

M.V. Collins, Deputy Minister
G.S. Hogg, Assistant Deputy Minister
Administrative Services
B.R. McKeown, Assistant Deputy Minister
Planning and Major Projects
D.P. Doyle, Assistant Deputy Minister
Highways Operations

A LOOK INTO THE FUTURE

from Vince Collins, Deputy Minister

In 1989/90 the major goals of the Ministry were to be more service-oriented and accountable to the public, more responsive to change and future-focused in planning transportation development. We want to better prepare the Ministry to meet the transportation challenges of the 90s and to serve the needs of all British Columbians.

Producing the first-ever Provincial Transportation Plan is just one of the ways we've planned to fulfill our goals.

This fiscal year, staff implemented a large number of initiatives. We made many changes in order to bring us closer to our goals. But we're not finished yet. There are still several areas that we feel could be enhanced.

The release of the Provincial Transportation Plan next fiscal year will be our green light for a new way of doing business in the 90s.

Planning is crucial, as the direction we take today will determine how efficiently and effectively goods and people will travel in our province tomorrow. It's especially crucial, as an efficient and effective transportation network helps to keep our economy going and growing.

In 1990/91 we want to:

- Improve the multi-modal capacity of our transportation network.
- Focus more on the best method to move people and goods, not vehicles.
- Promote transportation alternatives and the better use of all transportation modes.
- Encourage Transportation Task Forces to continue to meet with the public and to promote the development of all modes, not just highways, to prepare for the next Provincial Transportation Plan.
- Protect rights-of-way around the province for future transportation development.
- Work closer with municipalities and regional districts so that transportation planning is part of community and regional development planning.
- Research and identify more efficient, environmentally-sound and cost-effective methods of building and maintaining our highway system.
- Take a close look at road and bridge maintenance to assess the first three-year contracts. We want to identify areas that could be changed to enhance the service.
- Take a close look at our new Financial Management Information System (FMIS) to ensure that it is doing its job to increase accountability in managing public accounts.
- Make the Ministry more accessible to the public, more involved in the community.
- Encourage service excellence, to better serve the public.

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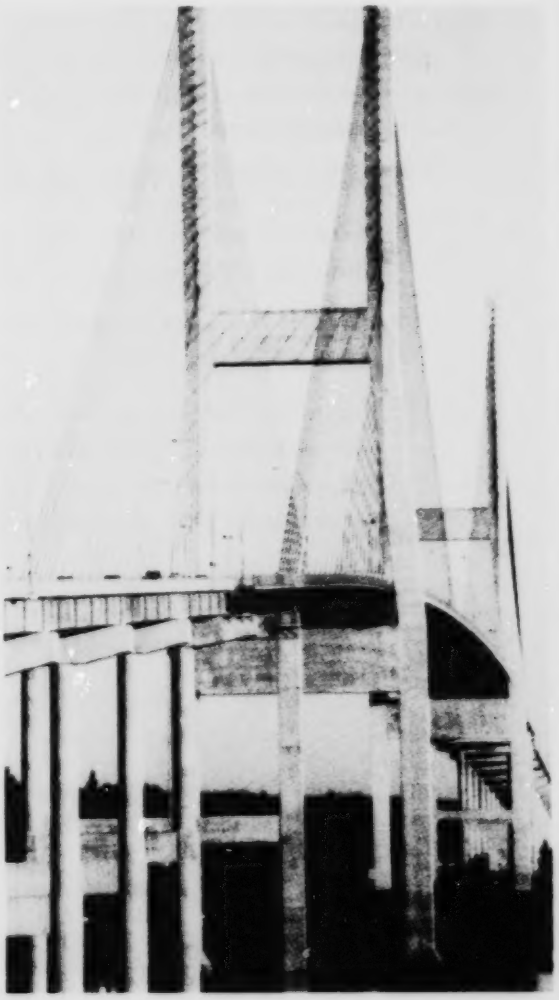
MISSION AND OBJECTIVES

Mission Statement:

The goal of this Ministry is to provide and maintain safe and efficient movement of people and resources on a multi-modal provincial transportation network in conjunction with the economic development of the province and in a socially and environmentally acceptable manner.

Objectives

- To plan, construct, operate, and maintain a safe and effective multi-modal provincial transportation network that will provide the freedom to move into the twenty-first century.
- To facilitate economic and social development of the province and every region within the province with social and environmental sensitivity.
- To coordinate responsible provincial transportation policy and legislation with other agencies and levels of government.
- To respond promptly to emergencies and disasters.
- To communicate with the public with regard to Ministry activities.
- To promote high-quality service to the public among staff.



19 1989/90 HIGHLIGHTS

- The Provincial Transportation Plan — initiated in 1988 to prepare the Ministry to meet the challenges of the future — is in its final stages.
- A formal Public Consultation Process was implemented to stimulate further public involvement in planning transportation systems that may impact on them.
- In the 1988/89 fiscal year the Ministry went through a major reorganization to better serve the public. Reorganization continues, to strengthen the planning sectors and increase financial accountability.
- In support of reorganization, special recruiting strategies were developed and implemented to attract skilled people and programs were initiated to train new employees and staff.
- Privatization of road and bridge maintenance completed its first year.
- The Internal Audit Department, set up to improve efficiency, economy and effectiveness in Ministry operations, also completed its first year.
- A Financial Management Information System was designed to improve recordkeeping and the efficiency of reporting.
- Most sections of the Okanagan Connector major project are now in the final construction phase with paving to be done in 1990. The completion date is still Fall 1990, one year ahead of the original schedule. The project remains within the original budget of $225 million (based on 1987 dollars).
- Some pre-construction work began in January 1990 on the Cassiar Connector — the major project to bring Highway 1 to freeway standard through Vancouver. Tendering for the major work was well under way by year end.
- Work continues on the Fraser River Crossing and Connections major project with the completion of the Richmond Freeway.
- Work also continues on the major projects to upgrade Okanagan Highway 97 from the U.S. border to the Trans Canada Highway and the Sea-to-Sky Highway from Horseshoe Bay to Whistler.

- September 8, 1989 a discussion paper to stimulate input from operators and users of ports was released, the first step in the creation of a Provincial Ports Policy to ensure our commercial and social needs are properly addressed in the development of ports/harbours in B.C.
- October 1989 a 24-hour toll-free telephone service was implemented to provide motorists with up-to-date reports on provincial highways: Around the province, 1-800-663-HWYS (4997) and in the Lower Mainland, 660-9775.
- October 17, 1989 a proposal to increase the people-moving capacity of a major commuter route, the Barnet/Hastings Corridor, was approved by local mayors.
- November 1, 1989 BC Transit, which formerly reported to the Minister of Municipal Affairs, Recreation and Culture, became the responsibility of the Ministry of Transportation and Highways. This makes possible the planning for the future of the province's transportation needs with coordination of all the various modes under one minister.
- December 7, 1989 an inter-ministry task force was appointed to review and simplify the policies and administration of resource roads to ensure the interests of both the public and industry are protected.
- February 15, 1990 a Provincial Transportation Council was announced. Appointees from the Ministry, BC Transit, British Columbia Ferry Corporation, BC Rail Ltd. and the Motor Vehicle Branch will work with and advise Government on the development of an integrated transportation system.

Keeping the public informed.

MINISTRY PROFILE

The Ministry of Transportation and Highways is responsible for planning, developing and maintaining the provincial highway system as well as developing the provincial transportation network including transportation by rail, transit, air, and water as well as by road.

To ensure that transportation develops in an orderly fashion, integrating and best utilizing all modes, the Crown Corporations involved in transportation report to the Minister of Transportation and Highways:

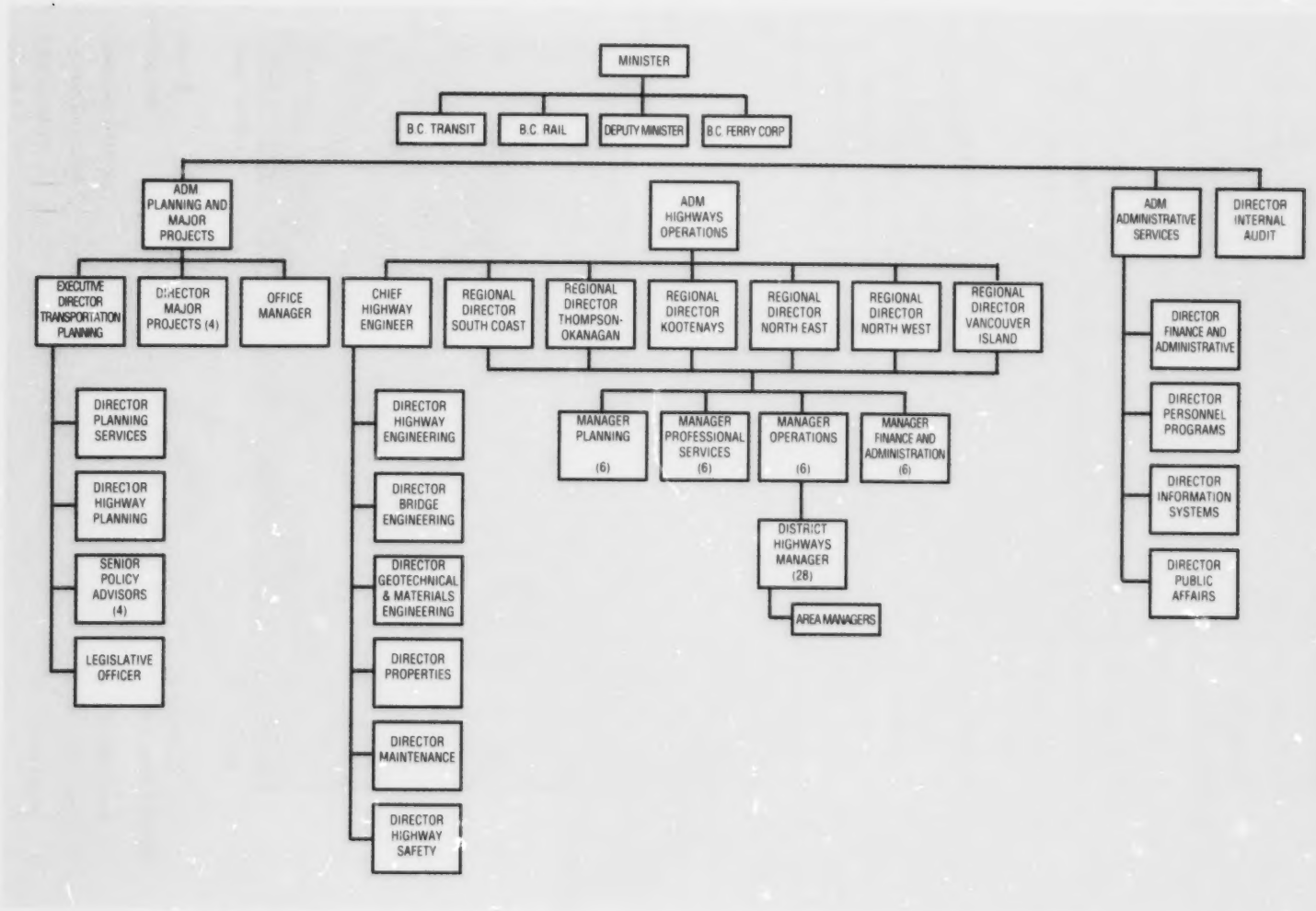
- British Columbia Ferry Corporation;
- BC Rail Ltd.; and
- BC Transit (as of November 1, 1989).

Though Crown Corporations support their own operations, the Ministry of Transportation and Highways contributes with both operating and capital grants.

The Legislative Acts

The Ministry is also responsible for ensuring that a number of Legislative Acts or sections thereof are fulfilled:

- Ministry of Transportation and Highways Act - This Act sets out the transportation and highways mandate of the Ministry.
- Highway Act - This Act governs the construction, maintenance, classification and protection of the public highways in the province, including bridges and tunnels.
- Other Acts: British Columbia Railway Act, British Columbia Transit Act (as of November 1/89), Coquihalla Highway Construction Acceleration Act, Ferry Act, Ferry Corporation Act, Highway (Industrial) Act, Highway Scenic Improvement Act, Metro Transit Operating Company Act (as of November 1, 1989), Pipeline Act (Transferred to Ministry of Municipal Affairs, Recreation and Culture September 15, 1990), Provincial Rapid Transit Subsidy Act (as of November, 1, 1989), Railway Act, Riverbank Protection Act, Transport of Dangerous Goods Act (Transferred to Ministry of Solicitor General February 8, 1990).


MINISTER
B.C. TRANSIT
B.C. RAIL
DEPUTY MINISTER
B.C. FERRY CORP
ADM PLANNING AND MAJOR PROJECTS
EXECUTIVE DIRECTOR TRANSPORTATION PLANNING
DIRECTOR MAJOR PROJECTS (4)
OFFICE MANAGER
DIRECTOR PLANNING SERVICES
DIRECTOR HIGHWAY PLANNING
SENIOR POLICY ADVISORS (4)
LEGISLATIVE OFFICER
ADM HIGHWAYS OPERATIONS
CHIEF HIGHWAY ENGINEER
REGIONAL DIRECTOR SOUTH COAST
REGIONAL DIRECTOR THOMPSON-OKANAGAN
REGIONAL DIRECTOR KOOTENAYS
REGIONAL DIRECTOR NORTH EAST
REGIONAL DIRECTOR NORTH WEST
REGIONAL DIRECTOR VANCOUVER ISLAND
DIRECTOR HIGHWAY ENGINEERING
DIRECTOR BRIDGE ENGINEERING
DIRECTOR GEOTECHNICAL & MATERIALS ENGINEERING
DIRECTOR PROPERTIES
DIRECTOR MAINTENANCE
DIRECTOR HIGHWAY SAFETY
MANAGER PLANNING (6)
MANAGER PROFESSIONAL SERVICES (6)
MANAGER OPERATIONS (6)
MANAGER FINANCE AND ADMINISTRATION (6)
DISTRICT HIGHWAYS MANAGER (28)
AREA MANAGERS
ADM ADMINISTRATIVE SERVICES
DIRECTOR INTERNAL AUDIT
DIRECTOR FINANCE AND ADMINISTRATIVE
DIRECTOR PERSONNEL PROGRAMS
DIRECTOR INFORMATION SYSTEMS
DIRECTOR PUBLIC AFFAIRS

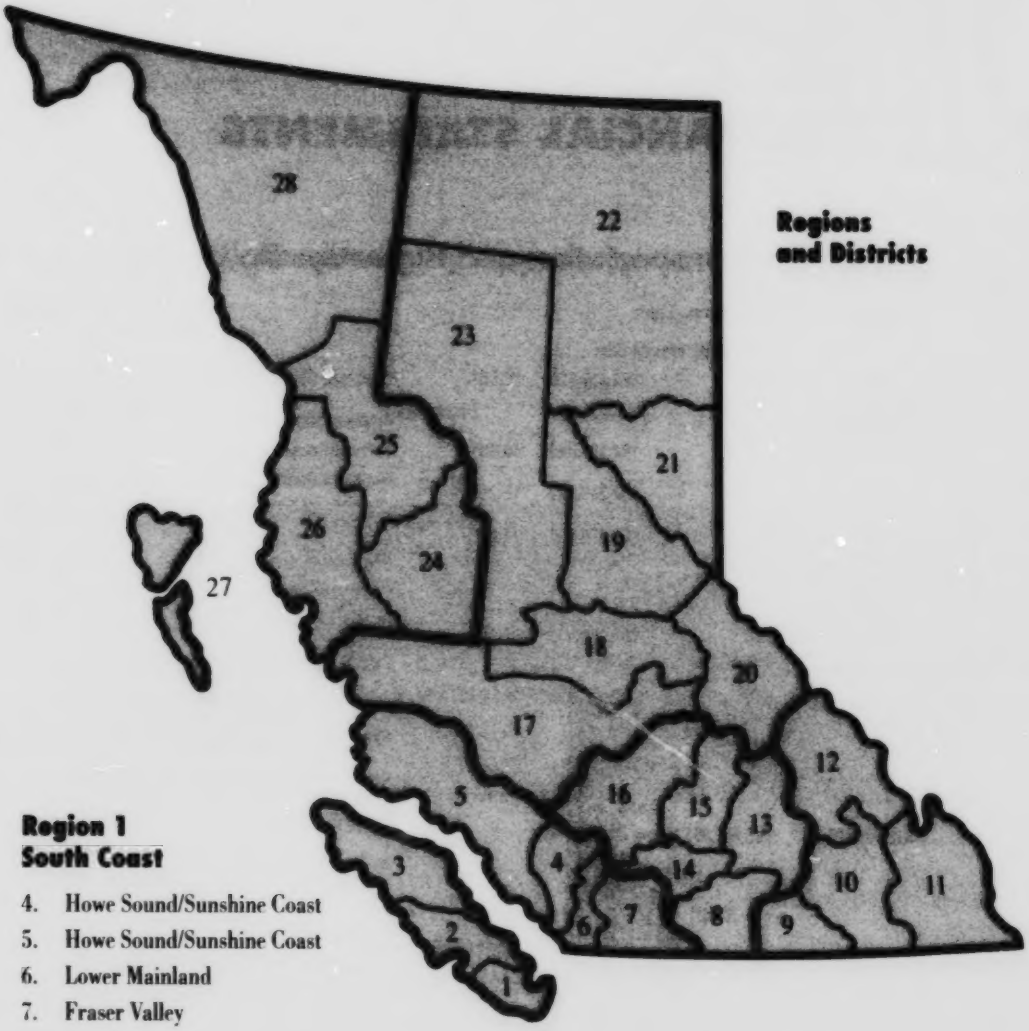
Ministry Structure

The Ministry of Transportation and Highways has 2683 full-time employees authorized in Headquarters at Victoria, in six highways regional offices and 28 highways districts.

- District staff perform the line tasks in the field, overseeing contract and maintenance work and the general condition of the provincial highway network in the area.
- Region staff are responsible for ensuring safe and efficient highways within their region as well as working with municipal governments and regional districts to plan and manage regional highways initiatives. The rehabilitation program is also established at the regional level.
- Headquarters staff lead the Ministry on matters of policy, standards, highway operations, planning and finance. Major projects planning and supply of professional services, as well as ensuring an efficient and effective overall provincial transportation system, are also the responsibility of Headquarters staff. All major projects having a capital cost over $50 million are managed by Headquarters staff for delivery to regions.

The British Columbia Highway System

	1988/89	1989/90
Total kilometers of road open	42,798	42,105
Total kilometres of paved road	22,182	21,904
Total kilometres of unpaved road	22,128	21,388
Total number of bridges	2,763	2,706
Total length of bridges in metres	141,318	126,344



Regions and Districts

Region 1
South Coast

4. Howe Sound/Sunshine Coast
5. Howe Sound/Sunshine Coast
6. Lower Mainland
7. Fraser Valley

Region 2
Thompson-Okanagan

8. South Okanagan
13. Okanagan-Shuswap
14. Nicola
15. Thompson
16. South Cariboo

Region 3
Kootenays

9. Kootenay Boundary
10. Central Kootenay
11. East Kootenay
12. Selkirk

Region 4
Central/North East

17. Central Cariboo
18. North Cariboo
19. Fort George
20. Robson
21. South Peace
22. North Peace
23. Nechako

Region 5
North West

24. Lakes
25. Bulkley Pass
26. Skeena
27. Skeena
28. Stikine

Region 6
Vancouver Island

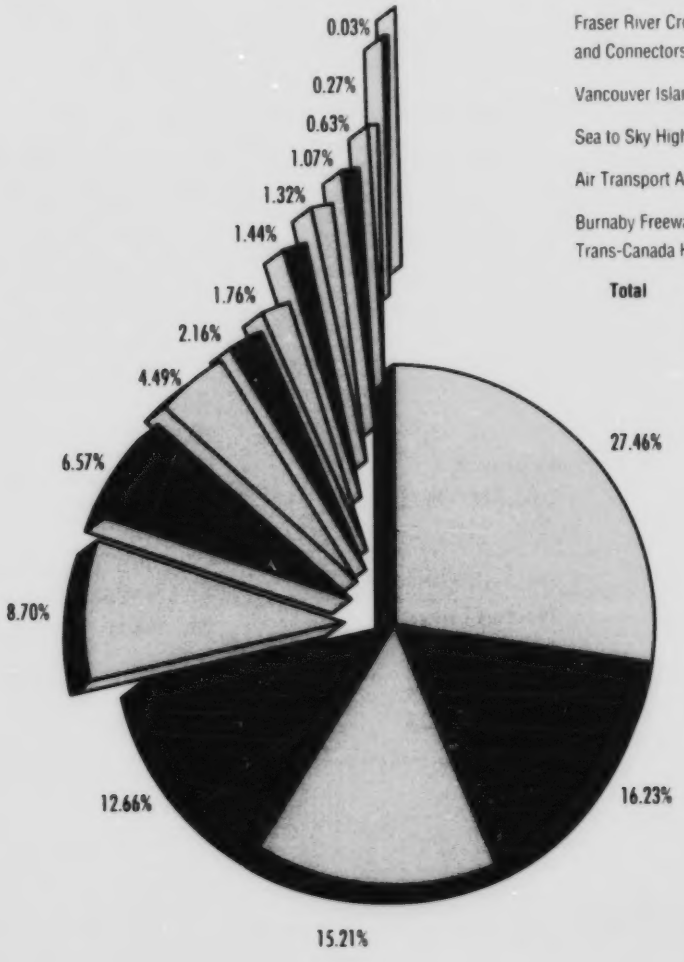
1. South Island
2. Central Island
3. North Island

FINANCIAL STATEMENTS

How the Transportation and Highways Dollar was Spent

Fiscal Year 1989/90 (Unaudited)

Highway Maintenance	329,112,829	27.46%
Highway Capital Construction	194,461,865	16.23%
Transit Services	182,239,362	15.21%
Highway Rehabilitation	151,678,635	12.66%
Contribution to the British Columbia Ferry Corporation	104,269,800	8.70%
Okanagan Connector	78,727,445	6.57%
Administration and Support Services (including Minister's Office)	53,777,636	4.49%
Highway #97 - Okanagan	25,939,006	2.16%
Contribution to the British Columbia Railway Company	21,094,000	1.76%
Cassiar Connector	17,256,777	1.44%
Fraser River Crossing and Connectors	15,764,468	1.32%
Vancouver Island Highway	12,826,290	1.07%
Sea to Sky Highway	7,558,896	0.63%
Air Transport Assistance	3,183,315	0.27%
Burnaby Freeway/ Trans-Canada Highway	495,428	0.03%
Total	**1,198,385,752**	



Summary of Expenditures by Appropriation

Fiscal Year 1989/90 (Unaudited)

Vote No.	Description	Total Appropriation Estimates $	Other Authorization $	Total $	Actual Expenditures $
72	Minister's Office	304,242		304,242	304,210
73.	Ministry Operations	1,015,849,683		1,015,849,683	1,015,842,180
	Statutory -				
	Constitution Act (R.S.B.C. 1979, Chap. 62, secs. 13 and 14)				
	- Transfer from the Ministry of Municipal Affairs, Recreation and Culture (Vote 47)		182,240,633	182,240,633	182,239,363
	Financial Administration Act (S.B.C. 1981, Chap. 15, sec. 22(1)) - net of recoveries				
	- Revelstoke Project - Highway 23				
	- Elkford Bridge - Fording coal mine road				
Totals		**1,016,153,925**	**182,240,633**	**1,198,394,558**	**1,198,385,753**

Subsidies to Crown Corporations

The British Columbia Railway Company and the British Columbia Ferry Corporation operate independently, but report to the Minister of Transportation and Highways. These Crown Corporations produce their own Annual Reports. Each year, provincial subsidies through the Ministry are given to assist in their operations.

Financial Assistance to British Columbia Railway Company Passenger Service	
Operating Assistance	**$2,950,000**
Royal Hudson Equipment Rehabilitation	$442,733
Passenger Car Purchase	**$193,333**
Fort Nelson Extension Operating Assistance	$5,000,000
Track Rehabilitation	**$12,507,934**
Total	**$21,094,000** *
Financial Assistance to British Columbia Ferry Corporation	
Asset Acquisition	$4,819,800
Grants and Contributions	**$99,450,000**
Total	**$104,269,800** *

* These amounts include prepayments of 1990/91 contributions of $5,768,000 for British Columbia Railway Company and $48,447,100 for British Columbia Ferry Corporation.

Summary of Expenditures by Electoral District

Fiscal Year 1989/90 (Unaudited)

Electoral District	Highway Rehabilitation	Roads Capital Construction	Fraser River Crossing & Connectors	Okanagan Connector	Vancouver Island Highway	Cassiar Connector	Sea-to-Sky Highway	Burnaby Freeway/ Trans-Canada Highway	Highway #97 - Okanagan	Total Expended
Alberni	2,270,373	1,176,775								3,447,148
Atlin	4,442,572	91,554								4,534,126
Boundary-Similkameen	8,430,406	1,220,685							14,856,802	24,507,893
Burnaby-Edmonds	77,689	120,618								198,307
Burnaby-North		222,760								222,760
Burnaby-Willingdon	44,094	31,797								75,891
Cariboo	15,522,680	8,981,152								24,503,832
Central Fraser Valley	2,117,809	530,054								2,647,863
Chilliwack	607,906	1,104,737								1,712,643
Columbia River	1,562,483	330,168								1,892,651
Comox	3,411,634	2,483,871			243,507					6,139,012
Coquitlam-Moody	3,976	366,029					12,097			382,102
Cowichan-Malahat	2,622,440	667,532			2,766,518					6,056,490
Delta	268,506	9,708,142	1,832,117							11,808,765
Dewdney	355,732	1,879,605								2,235,337
Esquimalt-Port Renfrew	1,598,433	3,816,059			73,419					5,487,911
Kamloops	4,843,228	8,127,000							74,802	13,045,030
Kootenay	3,354,394	1,007,915								4,362,309
Langley	2,507,524	4,365,146								6,872,670
Mackenzie	2,281,315	3,264,017								5,545,332
Maillardville-Coquitlam	1,783,253	139,389								1,922,642
Nanaimo	1,987,298	4,512,744			5,256,805					11,756,847
Nelson-Creston	5,324,283	8,625,189								13,949,472
New Westminster	1,423,483	567,297	2,251,427							4,242,207
North Island	3,519,734	3,428,673			20,858					6,969,265
North Peace River	4,019,494	2,836,876								6,856,370
North Vancouver-Capilano	51,538	4,362,442					29,034			4,443,014

Electoral District	Highway Rehabilitation	Roads Capital Construction	Fraser River Crossing & Connectors	Okanagan Connector	Vancouver Island Highway	Cassiar Connector	Sea-to-Sky Highway	Burnaby Freeway/ Trans-Canada Highway	Highway #97 - Okanagan	Total Expended
North Vancouver-Seymour		1,197,575					41,131			1,238,706
Oak Bay-Gordon Head										0
Okanagan North	2,844,887	1,454,549		115,649					7,976,419	12,391,504
Okanagan South	1,484,546	2,359,492		29,185,905					2,638,953	35,668,896
Omineca	9,644,806	5,022,437								14,667,243
Prince George North	5,147,996	7,235,920								12,383,916
Prince George South	7,069,844	3,679,051								10,748,895
Prince Rupert	1,111,686	1,641,366								2,753,052
Richmond	1,367,489	6,978,250	11,537,346							19,883,085
Rossland-Trail	952,366	3,743,274								4,695,640
Saanich & The Islands	1,189,405	777,670			1,298,626					3,265,701
Shuswap-Revelstoke	5,744,073	10,420,503								16,164,576
Skeena	7,125,007	8,650,820								15,775,827
South Peace River	10,256,224	82,492								10,338,716
Surrey-Guildford-Whalley	636,826	12,206,847								12,843,673
Surrey-Newton	125,553	54,816								180,369
Surrey-White Rock-Cloverdale	992,537	1,209,284								2,201,821
Vancouver Centre	44,999	106								45,105
Vancouver East		4,333				17,232,263				17,236,596
Vancouver-Point Grey	438,529	5,094								443,623
Vancouver South	49,416									49,416
Victoria					4,910					4,910
West Vancouver-Howe Sound	1,660,801	738,259					7,318,302			9,717,452
Yale-Lillooet	11,931,418	16,206,564		45,788,777						73,926,759
Headquarters	7,427,860	36,824,937	143,578	3,637,114	3,161,647	24,514	158,332	495,428	392,030	52,265,440
Totals	151,678,635	194,461,865	15,764,468	78,727,445	12,826,290	17,256,777	7,558,896	495,428	25,939,006	504,708,810

These figures have been rounded off to the nearest dollar

Summary of Expenditures on Major Projects

Fiscal Year 1989/90 (Unaudited)

Project Description	Previous Fiscal Years' Expenditures	1989/90 Fiscal Year Expenditures	Total Project Expenditures
Okanagan Connector	107,736,106	78,727,445	186,463,551 *
Fraser River Crossing and Connector	331,780,628	15,764,468	347,545,096
Vancouver Island Highway Project	1,258,517	12,826,290	14,084,807
Cassiar Connector	0	17,256,777	17,256,777
Sea to Sky Highway	0	7,558,896	7,558,896
Burnaby Freeway/Trans-Canada Highway	0	495,428	495,428
Highway #97 - Okanagan	0	25,939,006	25,939,006
Totals	**440,775,251**	**158,568,310**	**599,343,561**

* The authorized budget for this project is $225 million in 1987 dollars and net of employee benefit chargebacks. However the above noted expenditure figure includes employee benefit chargebacks and is in nominal dollars.

Statement of Expenditures
Maintenance and Operation of Fresh Water Ferries

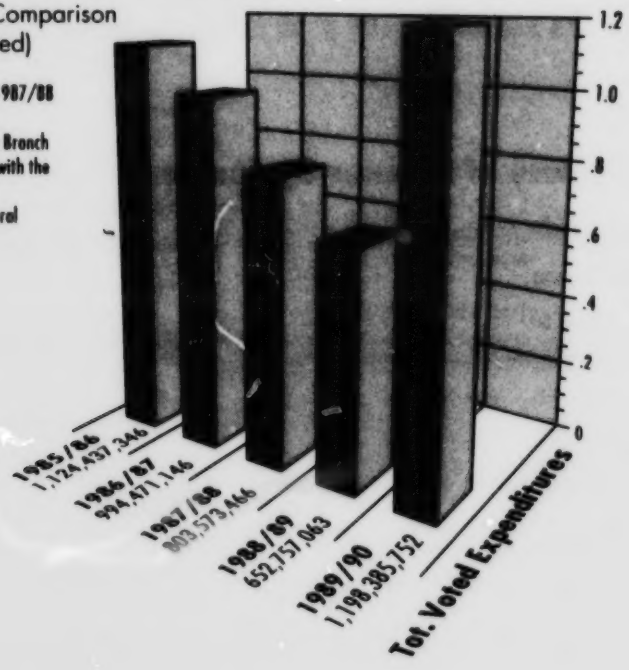
Fiscal Year 1989/90 (Unaudited)

Name of Ferry	Total Expenditures $
Albion-Fort Langley Ferry	2,428,576
Arrow Park Ferry	426,402
Barnston Island Ferry Subsidy	445,496
Francois Lake Ferry	1,343,627
Glade Ferry	205,369
Harrop Ferry	230,129
Kootenay Lake Ferry	2,092,775
Little Fort Ferry	71,160
Lytton Ferry	92,697
Marguerite Ferry	99,216
McLure Ferry	63,312
Needles-Fauquier Ferry	1,293,447
Shuswap Lake Ferry Subsidy	37,500
Upper Arrow Lakes Ferry	1,732,395
Usk Ferry	207,037
Total District Ferry Maintenance and Operations	10,769,138
Headquarters Ferry Maintenance and Operations	1,662,235
Total Ministry Expenditures	**12,431,373**

TOTAL VOTED EXPENDITURES

5 Year Comparison
(Unaudited)

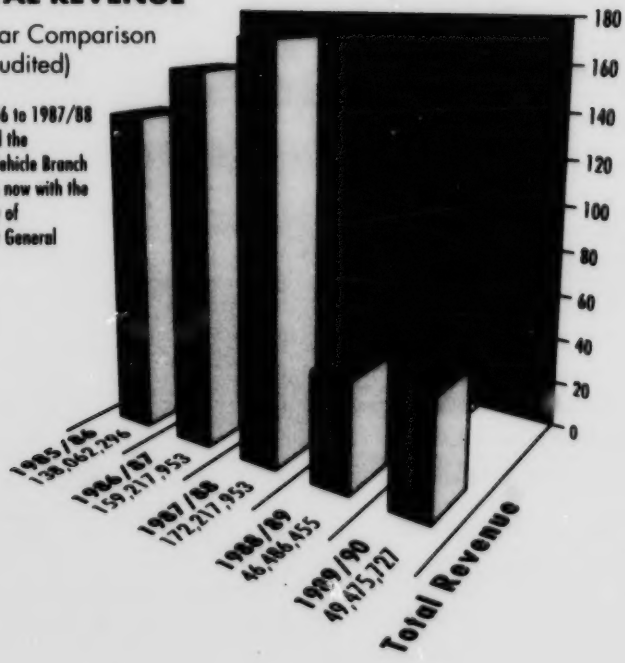
1985/86 to 1987/88 included the Motor Vehicle Branch which is now with the Ministry of Solicitor General



TOTAL REVENUE

5 Year Comparison
(Unaudited)

1985/86 to 1987/88 included the Motor Vehicle Branch which is now with the Ministry of Solicitor General



Summary of Revenue by Source

Fiscal Year 1989/90 (Unaudited)

Taxation Revenue	**Actual $**
Social Service Tax	
Social Service Tax on Cheque Vouchers	**1,245,346**
Other Revenue	
Sales and Services	
Coquihalla Highway Tolls	**21,237,578**
Licences and Permits	
Miscellaneous:	
Miscellaneous Sales	**1,046,696**
Plan Sales and Subdivision Fees	316,109
Rentals All Departments	**35,423**
Interest From Investments	
Foreign Exchange	**64,821**
Miscellaneous	
Insurance and Claims	500,674
Municipal Share Joint Service Program	**945,509**
Other Miscellaneous:	
Dishonoured Cheque Service Fee	**390**
Miscellaneous Highways	1,023,067
Gravel Licence & Royalty	**2,871**
Street Lighting	828,967
Other	**1,056,142**
Federal Contributions	
Transportation and Highways	
Federal Ferry Subsidy	**16,984,610**
Yellowhead Highway	3,890,606
Durrance Lake Road/Heal's Rifle Range	**296,918**
Total Revenue	**49,475,727**

Revenues shown reflect Ministry of Transportation and Highways receipts only. Information in the Public Accounts identifying revenue by source will contain revenue from all ministries, particularly in the case of "miscellaneous" receipts.

REORGANIZATION — TO BETTER SERVE THE PUBLIC

The reorganization and evolution of the Ministry to better serve the public was initiated in the 1988/89 fiscal year. It was put into practice in the 1989/90 fiscal year.

The Ministry in the Community

Reorganization concentrated on giving more responsibility to the regions and districts by decentralizing financial and highways operations such as:

- Planning;
- Engineering for project design;
- Construction management; and
- Property acquisition; as well as
- Privatizing highways maintenance. (See Maintenance section for detailed information on privatizing road and bridge maintenance.)

Strengthening the public consultation process.

Decentralization allowed the Ministry to:

- Become a more active member of the community;
- Strengthen the process of public consultation;
- Create a better framework for public accountability as well as transportation planning; and
- Be even more service-oriented.

Recruiting and Training for Improved Service

Beginning with the senior level of the Ministry and working through the organization, new positions were created and existing ones were revised to reflect the Ministry's goal to enhance service to the public.

- Special recruiting strategies were developed and implemented to attract skilled people to the Ministry as well as to move people within the organization as efficiently as possible.
- Approximately 600 positions were posted and filled by the promotion of employees and recruiting of new people.
- New programs in Project Management, Contract Administration and Computer Training were developed and delivered around the province to prepare staff for their new roles.

Public Accountability for Capital Projects

In response to recommendations in the McKay Report — Report of the Commissioner Inquiry into the Coquihalla and Related Highway Projects — in the 1988/89 fiscal year, project managers were appointed by the Ministry to every capital project to clearly define project responsibilities and authorities.

The practice proved to be successful in improving the development of project scope and budget, clarifying project approval, and establishing cost control mechanisms and reporting processes.

Project managers and their support staff:

- Manage every facet of the project including corridor selection, preparation of costs documentation, and construction;
- Ensure that all phases of a project go forward as effectively and efficiently as possible, on schedule and within budget;
- Oversee the public consultation process so that the affected public is notified on each phase of a project (See Public Consultation section for further details); and
- Make sure that public as well as municipal concerns are addressed during the planning process.

Project managers are located in the regions, except for major projects.
Major projects are managed by a special office at Headquarters.

Financial Accountability

In response to recommendations in the McKay Report, to enhance financial accountability, the Ministry purchased a new Financial Management Information System (FMIS). This system was to replace the ten-year old GLADIS system, which was not capable of the features necessary to decentralize financial operations and enhance financial accountability.

Ministry staff working for a service-oriented industry.

Ministry staff maintains budgetary control.

Phase I of the implementation began during the 1989/90 fiscal year with actual implementation to be on April 1, 1990.

Termed the "Government Expert Series", this system relates specifically to government accounting systems and is in use in the Canadian Federal Government and the British Columbia ministries of Social Services and Housing and Attorney General as well as the Ministry of Transportation and Highways.

FMIS provides the ability to maintain effective budgetary control. The benefits of FMIS are:

- Discontinuance of manual ledgers;
- Distributed source entry and information retrieval to allow decentralization of financial operations to the regions and districts so accountability at source is achieved;
- Consistency in coding and entry approach again to enhance the effectiveness of decentralization;
- Improved reporting ability so the Ministry can have an up-to-date status of available funds or can find out where, when and how it has spent its money;
- Structured and enhanced control over project costs including a work breakdown structure to create activity/cost categories;
- Flexibility in managing budgets because expenditures can be monitored at multiple levels by vote, department, etc.; and
- Validates expenditures or commitments at time of entry to ensure availability of funding before being processed.

FMIS will evolve over time, which is another plus for the system, because it does have the ability to evolve. It is anticipated that where FMIS currently provides for source entry it will become the "feeder" to other systems requiring that data.

Internal Audit Department

The Internal Audit Department (IAD), established in 1988/89, completed its first year of operations. Its objective is to serve the public through the improvement of:

- Efficiency;
- Economy; and
- Effectiveness in its operations.

In 1989/90 the IAD looked at Headquarters and region operations including asset controls and expenditures, contract advertising and hired equipment.

In 1989/90 the IAD looked at Headquarters, regional and district operations including asset and expenditure controls, contract administration and hired equipment.

Providing the Technology to Decentralize

New equipment was placed into regional highway project offices and a Highway Engineering Information System was designed to:

- Provide the support material to facilitate a cost-effective, professional level of service;
- Increase productivity;
- Enhance site-to-office communications; and
- Create a resource tool for better decision-making.

Some 100 workstations were purchased including computers, printers, modems and digitizing tablets and a variety of engineering software tools.

Ultimately, the Highway Engineering Information System (HEIS) will form part of a shared, major data base and serve all phases of highway engineering from planning through to construction.

Fair Access to Ministry Business

Early in 1989, due to reorganization and privatization of road and bridge maintenance, it was recognized there was a need for a formal process to hire qualified engineering firms, local equipment, etc.

In 1989/90, RISP (Registration, Identification, Selection and Performance Evaluation) for hiring engineers and a Hired Equipment Policy were developed to ensure:

- The greatest performance value is received for public funds;
- The process of hiring was open, fair and credible; and
- Access to Ministry business was available to all qualified firms/individuals on a rotational basis.

(For details on how the RISP and Hired Equipment Policy work see Appendix B)

A Hired Equipment Policy was developed to ensure fair access to Ministry business.

PROVINCIAL TRANSPORTATION PLANNING

In 1988, the Ministry recognized there was a need for a Provincial Transportation Plan to better direct resources to ensure the transportation network meets the needs of the province and its people today and in the future. Last fiscal year, the Ministry commissioned a report that:

- Provided an inventory of each mode — rail, air, ferry, transit, ports and roads;
- Identified pressure points, deficiencies and concerns of each;
- Established the quality of service currently provided;
- Provided a transportation-planning framework to assist in the coordination of planning on a multi-modal basis; and
- Developed a road-planning organization and methodology to establish a framework for planning road initiatives.

This report was used as a resource for preparing the Provincial Transportation Plan.

Planning From the Public Viewpoint

The process of public consultation is important to the Government and as such played a vital part in preparing the plan.

In 1989/90, the Ministry went to the public to receive their input. This was to:

- Gather public input on individual concerns and suggestions on the future of transportation in the province; and
- Ensure that local and regional needs would be addressed.

This was accomplished through the creation of a regional Transportation Task Force in each of the eight Economic Development Regions of the province.

Public consultation in action.

Transportation Task Forces

Ministers of State and MLAs from each economic region appointed members to the Task Forces, including local mayors, aldermen, members of Chambers of Commerce, Economic Development Commissions, tourism associations, industry representatives and other knowledgeable citizens.

Their responsibility was to :

- Determine the present and future transportation needs and priorities of each region through a series of public meetings around the province;
- Analyze public issues and provide support documentation for recommended improvements; and
- Recommend to Government transportation initiatives that included short- and long-term priorities for all transportation modes: roads, railways, ferries, airports, transit and ports.

The Task Forces met with, as well as received, presentations from the public over four months. They forwarded their recommendations to Government in the Fall of 1989.

These recommendations have been reviewed and will be integrated and combined with Ministry considerations to produce the first Provincial Transportation Plan.

As of March 31, 1990, the Provincial Transportation Plan is nearly completed. It will be released in the Spring of 1990.

Transportation Task Force Public Meetings and Submissions

Region	Public Meetings	Public Submissions
Region 1 - Vancouver Island/Coast	11	163
Region 2 - Mainland Southwest	19	291
Region 3 - Thompson-Okanagan	13	404
Region 4 - Kootenays	7	137
Region 5 - Cariboo	10	163
Region 6 - North Coast	9	40
Region 7 - Nechako	11	65
Region 8 - Northeast	7	50

* The Mainland Southwest Transportation Task Force was broken into six subcommittees to facilitate the public consultation process.

Identifying Projects - Regional vs. Provincial

Priority projects (to be completed in one to five years) for the Provincial Transportation plan are first identified according to regional need to address immediate problems such as:

- Providing access to services or areas for resource or other economic development;
- Travel efficiency; and
- User or pedestrian safety.

Where the road meets the ferry at Horseshoe Bay Terminal, in West Vancouver.

Each project is considered on an individual basis and then balanced against overall provincial need to ensure that:

- Public funds are used most effectively;
- The provincial transportation network continues to maintain the ability to move goods and people effectively to keep our economy healthy;
- Initiatives work to stimulate economic development in every region of the province; and
- The people of British Columbia have the choices they need to carry them into the twenty-first century.

Multi-Modal Development

One of the prime motivating factors in creating the Provincial Transportation Plan was to promote a new way of doing business, focusing on ways to:

- Address the problems of congestion and pollution in populated areas;
- Preserve rights-of-way for future transportation initiatives;
- Improve the effectiveness of the network where the different modes meet (e.g. roads and transit to ferries, roads and rail to ports); and
- Develop a multi-modal transportation network using the best of all modes to move people and goods.

Planning for the future will focus on how to move more people and goods, not simply more vehicles.

Transportation Council

February 15, 1990, to help fulfill the multi-modal objectives of the Ministry, a Provincial Transportation Council was formed.

This Council includes representatives from each Crown agency involved in transportation — BC Transit, British Columbia Ferry Corporation, BC Rail Ltd. — as well as this Ministry and the Motor Vehicle Branch of the Ministry of Solicitor General.

This Council advises the Minister on the integration and the better use of all modes of transportation.

It is also a body that brings together experts in transportation who have the ability to explore and create new methods of providing British Columbians with the most effective transportation systems, recognizing our finite resources and the constraints of our environmental and economic objectives.

An example of a multi-modal initiative on Highway 99 at the George Massey Tunnel: bus-only lanes and during peak periods, a counterflow lane

MULTI-MODAL DEVELOPMENTS

Ports Policy

In September 1989 the Ministry released a Ports Policy Discussion Paper. The document recognizes that ports have a significant impact upon a number of areas of provincial interest.

Passenger and vehicle ferries connect Vancouver to Vancouver Island

It was produced in response to:

- Public concerns that ports are too important to the economic, social and recreational needs of British Columbia to leave solely to the jurisdiction of the Federal government;
- The baseline transportation study commissioned by the Ministry that included an overview of the operations of ports in British Columbia and recommendations calling for more active participation by the province in the ports sector; and
- A Harbour Authority Program that was introduced in mid 1988 by the Federal Department of Fisheries and Oceans to devolve the management of wharves and facilities to interested municipalities and other local groups.

The Ports Policy Discussion Paper outlined the rationale for provincial interests and presented recommendations from three related studies:

- The baseline transportation study;
- A second study commissioned by the Ministry specifically to study provincial participation in the harbours and ports; and
- Thirdly, a study directed at the impact of the Harbour Authority Program on local government and provincial Crown land.

In response to public interest, more than 2000 copies of the paper were distributed to communities, port operators, users, local governments and other interested parties, many of whom requested meetings and/or submitted their views in writing.

Analysis of public input generated 14 major issue areas which recognized a need for provincial involvement in unorganized ports outside the Canada Ports Corporation and Harbour Commission structures.

These included, among others:

- Land tenure and land use;
- Transportation system development;
- Local autonomy and participation;

BC Railway, a valuable component of the provincial transportation network.

- Funding:
- Economic and regional development: and
- Social obligations to isolated and marine dependent communities.

The Discussion Paper also recognized the need for a more formal and effective communication channel for planning, management and development of major ports in British Columbia.

A Ports Policy for British Columbia will be announced in Summer of 1990.

Rail Initiatives

E & N Legal Challenge - The province was successful in its legal challenge of the Federal government's 1989 decision to terminate VIA Rail passenger services on the E & N Railway.

Passenger services were ordered to be continued, thereby maintaining an important transportation route for Vancouver Island residents and tourists.

Royal Hudson Steam Train - January 1990, Cabinet determined that effective April 1990, funding responsibility for the Royal Hudson Steam Train operation would be transferred to the Ministry of Transportation and Highways from the Ministry of Municipal Affairs, Recreation and Culture.

Administrative and operating responsibility was transferred at the same time to the British Columbia Railway Company from the Royal Hudson Steam Train Society.

Resource Roads Study

An issue identified in the transportation planning process was the need to simplify the management of resource roads.

The economy of the province of British Columbia depends on its natural resources. Therefore, resource roads, such as logging and mining roads, are an important part of the provincial transportation plan.

The regulatory framework for resource roads consists of:

- Five agencies;
- Five statutes; and
- Four major regulations.

This means, in theory, one road can be partly owned by both public and private interests with several different companies and ministries claiming jurisdiction.

In September 1989 the Ministry set up a task force to study the present management of resource roads and identify areas for improvement. The task force included representatives from the agencies involved:

Transportation and Highways

Forests

Crown Lands

Parks

Native Affairs

Regional & Economic Development

Energy, Mines & Petroleum Resources

Municipal Affairs, Recreation & Culture Tourism

Solicitor General

Environment

A preliminary study was completed in March 1990 which included findings of some of the Regional Transportation Task Forces.

It identified a number of issues to be addressed, including:

- Multiplicity of jurisdiction and the approval process;
- Concern for the public interest in using resource roads;
- The impact of the abandonment of resource roads by private road operators to the public highway network;
- Traffic regulations and enforcement;
- Native people's concerns; and
- Environmental impacts.

The results of the study will be taken to the public most affected by these issues before final recommendations for the management of resource roads will be put forward in 1990/91.

Expanding the People-Moving Capacity of Roads

It is now Ministry policy, when evaluating means of expanding major commuter routes, to focus on enhancing people-moving capacity. This means careful consideration of operating advantages for public transit and high-occupancy vehicles.

The first people-moving road project — the Barnet/Hastings People-Moving Project — has been initiated along the south shore of the Burrard Inlet linking Coquitlam and Port Moody to Burnaby and Vancouver.

The project was approved in principle by the mayors of the communities that will be affected by it. It will involve roadway improvements and operating the road system in a manner that will encourage the use of public transit and carpooling.

Airport Initiatives

See Community Support Programs Section, The Air Transport Assistance Program.

Cycling over the Alex Fraser Bridge in the Lower Mainland.

BUILDING NEW ROADS

The development of our highway system continues with the building of new roads as part of the Ministry's Capital Construction Program (See Appendix C for Capital Construction Program Elements) to:

- Address safety concerns;
- Open up new areas to stimulate regional economic development or to access already located resources;
- Provide a more efficient transportation system to encourage further trade and tourist travel in those regions with the potential for growth; as well as to
- Alleviate traffic congestion or traffic flow problems in populated areas.

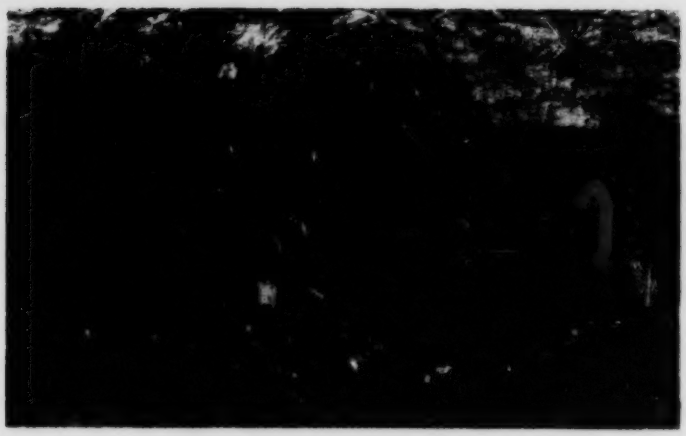
This fiscal year, 167 km of road was added to the system along with 11 bridges (For a list of the bridges added to the system, refer to Appendix D).

Major roadbuilding projects appear in the Major Projects section. (For highlights on highway works performed by region and district see Appendix E.)

Identifying Projects

Projects are identified according to regional need. The decision to go ahead is based on:

- Economic development needs in the region and province-wide;
- Transportation need in the region and province-wide;
- Public input; and
- Previous work done in the area.



Last stage in the road building process – construction.

The Planning Process

Major roadbuilding projects are usually carried out over several years beginning with the planning process.

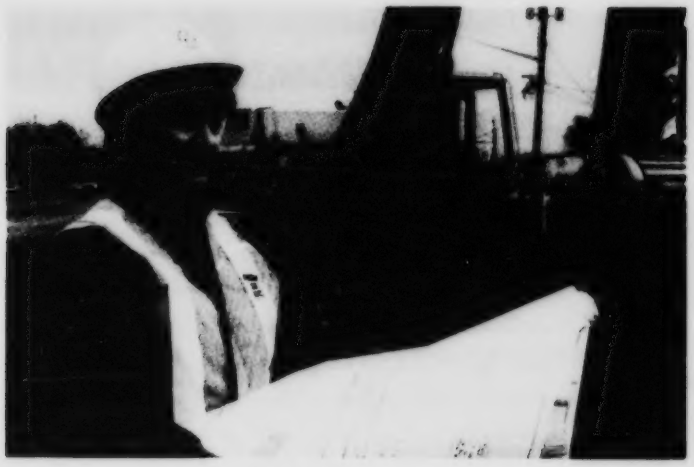
The objective of the planning process is to provide a sound basis for preliminary design.

The first stage of the process looks at the overall area to identify transportation corridors (both existing and potential) and routes within the corridors. This stage can take more than 12 months to carry out and includes:

- Transportation Needs Assessment - to determine which modes of transportation will best serve the public's needs and which type of highway can best deliver the required function safely and efficiently. This establishes desired standards, including highway geometry, design speed, and control of access;
- Terrain Studies - to establish the best options considering geography and cost;
- Road Networks Evaluation - to ensure that existing and future provincial and municipal routes will be able to interact well with (and within) a given corridor;
- Environmental Impact Assessments - conducted in cooperation with the Ministry of Environment using private companies to study impacts on fish, forests, wildlife, water quality, and vegetation, etc. (Details of Ministry environmental workings under Environmental Initiatives Section);
- Land-Use Studies - to ensure the best use of the land with as little impact as possible on the environment and that future changes in land use will not adversely affect the transportation system;
- Public Consultation - to assist in identifying and addressing public concerns as well as choosing a corridor that will impact as little as possible. (Details of the public consultation process in Public Consultation section.)

Once a corridor has been identified, pre-construction planning and design begin. This process usually takes an average of six to eight months, depending on the size of the project. It includes:

- Survey of alignment;
- Soils investigation;
- Survey of local construction materials;
- Drainage plans;
- Planning to accommodate specific demands (eg. major developments, shopping centres, etc.);



Project Manager overseeing construction.

- Further studies and design for environmental mitigation measures;
- Property negotiations;
- Highway design, including alignment, laning, intersections, safety devices, etc.;
- Structure design, including bridges, interchanges, culverts, retaining walls, etc.;
- Scheduling and staging of work;
- Cost estimates;
- Preparation of contract documentation; and
- Tender calls.

Once a contract is awarded, construction soon follows.

Property Negotiation

To protect the public's interest, provincial property acquisition standards and procedures, including land and building appraisals and negotiating with owners, were developed.

This fiscal year, 678 property acquisition agreements were negotiated at a total cost of $32,850,987. Of this sum, $9,579,635 was spent on the Cassiar Connector Major Project in Vancouver and $2,375,758 on the Okanagan Highway 97 Major Project.

Expropriation Act

This Act, which became law in 1987, protects the interest of property owners by guiding how the Ministry acquires properties for highway purposes. It provides property owners:

- Longer lead time to deal with the Ministry and to make decisions for their benefit;

- Legal and appraisal services to ensure owners receive fair compensation; and
- A forum — Expropriation Compensation Board — through which compensation disagreements may be arbitrated.

This year two arbitrations involving the Ministry of Transportation and Highways were heard.

One arbitration was a road improvement project along Monck Park Road in the Thompson-Okanagan Region. It involved a challenge of the Ministry's resumption powers on Crown land grants. These grants are subject to the right of the Crown to take back as much as 1/20th of the land for roads and/or bridges without payment or compensation unless the land has been approved for housing.

The second arbitration was in the South Coast Region and involved a disagreement between a land owner and the Ministry with regard to accessing files the Ministry deemed to be confidential that concerned other settlements in the area.

UPGRADING FOR GROWING TRAFFIC VOLUMES

The program to upgrade our existing highway system for growing traffic numbers continues as part of the Ministry's Capital Construction Program (See Appendix C for Capital Construction Program Elements) to:

- Enhance the safe and efficient movement of goods and people;
- Increase carrying capacity and alleviate traffic congestion;
- Support regional development as well as encourage tourist travel and;
- Protect the public investment in the provincial highway system.

Upgrading projects include widening major roads and straightening curves, eliminating at-grade intersections and widening and replacing bridges.

Identifying Projects

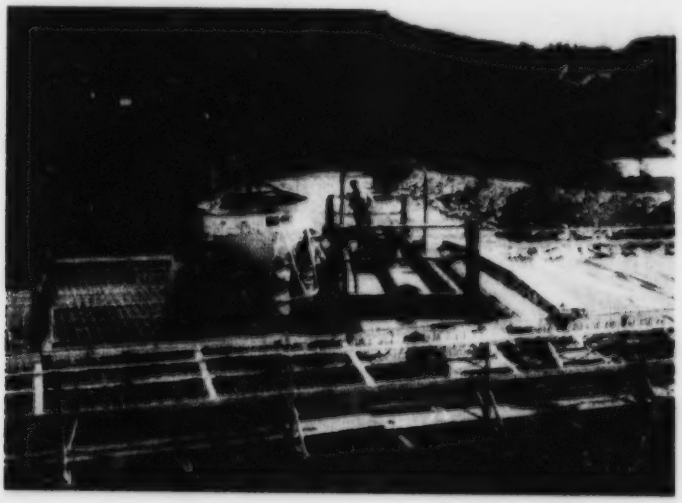
Identifying projects for upgrading is much the same process as for building new roads:

- Economic development needs in the region and province-wide;
- Transportation need in the region and province-wide;
- Public input; and
- Previous work done in the area.

Plus,

- In-depth corridor studies are taken at intervals along all the major routes to identify traffic volume demands and safety hazards.

If there is an area along a route that is experiencing serious traffic delays and/or has the potential to



Building Wathl Creek Bridge to provide access to the Village of Kitimaat.

cause accidents, this will become a possible project for upgrading with priority established through the Provincial Transportation Plan process.

Highlights of upgrading projects in the 1989/90 fiscal year are as follows. (For highlights on highway works performed by district and region see Appendix E)

Trans Canada Highway 1

The program to upgrade the Trans Canada Highway 1 continues:

- In Vancouver, Cassiar Connector - Project to upgrade the Trans Canada Highway to a freeway standard to the Second Narrows Bridge was announced. (Details in Major Projects section.)
- East of Kamloops, Barnhartvale to Campbell Creek - In the design phase for four-laning 9.34 km of highway complete with collector roads, pedestrian overpasses and a vehicular overpass.
- In Salmon Arm, Hospital Road to Highway 97B - Design under way on 4.9 km of four laning along with a frontage road system and a grade-separated interchange at Highway 97B.
- East of Salmon Arm, Canoe to Ann's Bay - In the design and property acquisition phase for four laning 10 km of highway.
- Donald to Yoho National Park - Corridor study to assess traffic volume demands and safety hazards.

West Trail Approach on Highway 22.

Slocan Bluffs
on Highway 6.

Yellowhead Highway 16

In 1987 the British Columbia government and the federal Government negotiated a $36 million cost-sharing agreement for three projects along Highway 16 and 5.

- Inver Quarry to Aberdeen Creek - Construction of 4 km of rock fill road base to lessen the incline of the highway approximately 40 kilometres west of Prince Rupert. Also provided wider highway with improved alignment to reduce the arc of a sharp curve and a CNR track overpass to address traffic flow as well as safety concerns.
- Khyex River to Aberdeen Creek - Construction of 5 km of rock fill road base to lessen the incline of the highway approximately 45 km east of Prince Rupert. This project addressed safety concepts and allowed the speed limit to be raised as it provided improved road width and alignment and a CNR track overpass.
- Another sharp curve that caused safety concerns, east of Smithers at Greiders Corner, was eliminated by 1.1 km of realignment.
- A two-year project began this year to relax yet another sharp curve and reduce the grade along 1.5 km of Highway 16 approximately 45 km west of Burns Lake at Meanwhile Corner.

Yellowhead Highway 5

The ongoing upgrading program from Kamloops to Heffley Creek continues.

This year the construction of a four-lane highway, complete with collector roads, was begun to improve access as well as travelling safety and efficiency from Raleigh to Heffley Creek.

Highway 22

Construction began on the Trail approaches to alleviate significant traffic and safety concerns along a narrow section of two-lane highway with a sharp curve that needed a traffic controller during peak traffic periods. The road will be widened to four lanes and two signals installed.

Highway 6

Improvements to this highway to enhance safety were a priority this year.

- Construction began on the realignment and widening project at Slocan Bluffs. This 6 km stretch of highway presently allows for only one lane of traffic because of the rough terrain. The road will be realigned and widened to two lanes.
- Other alignment improvements to reduce the arc of sharp curves were made at Rosebery and in the Bench Creek area.

Highway 101 - Sunshine Coast

The upgrade of this highway to improve safety and provide an enhanced tourist route continues this year with the start of a project to realign and rehabilitate from Secret Cove to Wood Bay. This project is the second of three that will see 30 km of upgraded road from Secret Cove to the ferry terminal at Gibsons.

Highway 97

The long-term program to upgrade the Okanagan Highway 97 to a high-quality, four-lane highway continues (see Major Projects section for more details).

MAJOR PROJECTS

A major project is a highway project with an estimated cost of more than $50 million. This may include reconstruction of an existing highway as well as new highway construction.

The prime motivating factors for initiating a major project are:

- Public safety;
- Traffic efficiency;
- Accessing new areas for economic development;
- Improving access to existing communities to stimulate further economic development; and
- Enhancing and developing the existing provincial transportation plan for the economic and social benefit of British Columbians.

Major projects are usually carried out over several years with at least half the time allotted for planning (see Building New Roads section for detailed information on the planning process), including the processes of public consultation and environmental studies.

At this time, the Ministry has six major projects at varying stages of development.

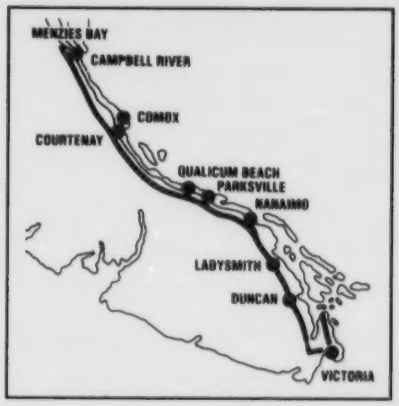
Vancouver Island Highway

Announced in November 1988, this is the largest highway project ever undertaken by the Ministry. It is being built to address present transportation needs in answer to:

- Increasing public concerns for user safety; and
- Mounting traffic congestion problems in municipalities along the route.

Okanagan Highway 97
– one of six major projects.

During peak construction, more than 1800 workers will be employed each year to completion.



The scope of the project includes:

- Upgrading two highways - Highway 17 from Swartz Bay to Victoria and the Trans Canada Highway from Victoria to Nanaimo - to a four-lane expressway standard;
- Construction of a new inland route from Parksville north to Campbell River; and
- Construction of a new expressway route through Nanaimo.

Most sections of the Island Highway project are now in the planning and preliminary engineering stage.

A major public information program has been launched to ensure that all interested parties are well informed and can contribute to the definition of this project.

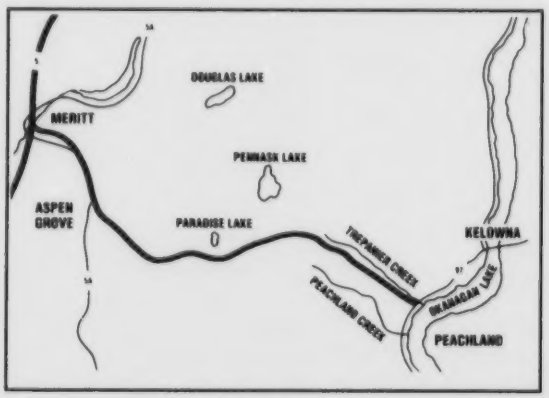
The Vancouver Island Highway is scheduled for completion in 1996 with the budget being set at the end of the preliminary engineering phase.

Okanagan Connector

This project is the third component of a system of highways providing a new high-quality highway linking the Lower Mainland to the southern Interior and designed to:

- Stimulate economic development by providing access to new areas of the Interior and providing further tourist routes; and
- Provide a safe, efficient alternate route for moving people and goods.

Phase I involved new construction of 115 km of four-lane highway from Hope to Merritt that was opened May 16, 1986.



In Phase II, 75 km of new highway was built from Merritt to Kamloops and opened September 4, 1987.

Phase III, the Okanagan Connector consists of:

- A total of 108 km of road connecting Highway 5 at Merritt to Highway 97, between Peachland and Westbank; 84 km of which, from Aspen Grove to Highway 97, is new four-lane highway, as well as from Merritt to Garcia Lake to replace Hamilton Hill;
- Four precast concrete girder construction bridges; and
- A comprehensive wildlife protection program, including wildlife fencing along 84 km of highway and 286 one-way gates, to allow wildlife that might be on the highway safe access from it, as well as 20 underpasses and Canada's first overpass designed specifically for deer.

The project will create 2100 person-years of work.

Completion of the Okanagan Connector will:

- Reduce travel time between the Okanagan and the Lower Mainland by 90 minutes;
- Create a number of circle routes to encourage further exploration of the Interior; and
- Provide an alternate high-capacity route between the Okanagan and the Lower Mainland.

Most sections of the project are now in the final construction phase with paving to be done in the summer of 1990.

The Okanagan Connector project is scheduled for completion in the Fall of 1990, one year ahead of schedule and within the budgeted cost of $225 million (1987 dollars).

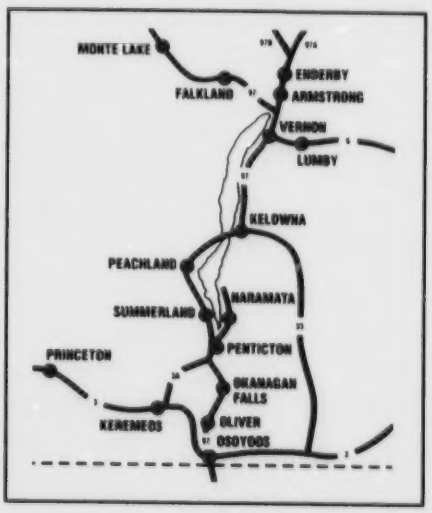
Okanagan Highway 97

This is an ongoing reconstruction project of Highway 97 from the U.S. border to the Trans Canada Highway, including Highways 97A and 97B. It was announced in 1988 to:

- Relieve growing traffic congestion through populated areas;
- Address public concerns for user safety.

Construction projects this fiscal year include:

- Eckhardt Bridge to Penticton Indian Reserve No. 1 North Boundary - 1.5 km of four-lane highway reconstruction just north of Penticton to relieve a two-lane bottleneck. (With the completion of the Trout Creek to Bentley Road, there will be a four-lane highway from Summerland to Skaha Lake.)
- Trout Creek to Bentley Road - 9.3 km of four-lane highway reconstruction through Summerland to add traffic capacity in a congested area.



- Beaver Lake Road to Woods Lake - 5.0 km of four-lane reconstruction through Winfield to relieve traffic congestion.
- Vernon 32nd Street Extension - New 5.0 km of four-lane highway relocating Highway 97 through the north side of Vernon as the existing route through the city is congested and circuitous.

The Okanagan Highway 97 project scope, construction schedule and budget require considerable additional planning and engineering before they can be adequately defined for seeking project approval.

Fraser River Crossing and Connections

The Highway 91/91A system (Fraser River Crossing and Connections) interconnects the Delta and Surrey areas south of the Fraser River with Richmond and the New Westminster area via the Queensborough Bridge.

Although the system was planned as a freeway with full interchanges, the Alex Fraser Bridge and connections opened in 1986 with at-grade intersections serving the Queensborough area and with an interim connection to the old Westminster Highway serving Richmond.

The Richmond Freeway (Highway 91A) provides an alternate route for traffic into Richmond and to Vancouver via Knight Street, and was largely completed in 1989 at the cost of $100 million. The final phase of the project will be to replace the three signalized intersections on Highway 91A with interchanges, bringing 91A to full freeway standard.

The interim system was anticipated to meet short-term traffic demands and to provide relief to the Massey Tunnel and the Port Mann Bridge. The accelerated development south of the river has generated traffic growth which results in substantial congestion at the signalized intersections along Highway 91A.

The congestion can be relieved by the conversion to full freeway standard.

The Highway 91/91A system includes:

- The world-class Alex Fraser Bridge;
- The first freeway-to-freeway interchange (Highway 99 and the Richmond Freeway) in British Columbia;
- Over 30 km of new multi-lane highway;
- 37 bridges and overpasses;
- 16 km of connecting roads; and
- Relocation of 11 km of rail lines.

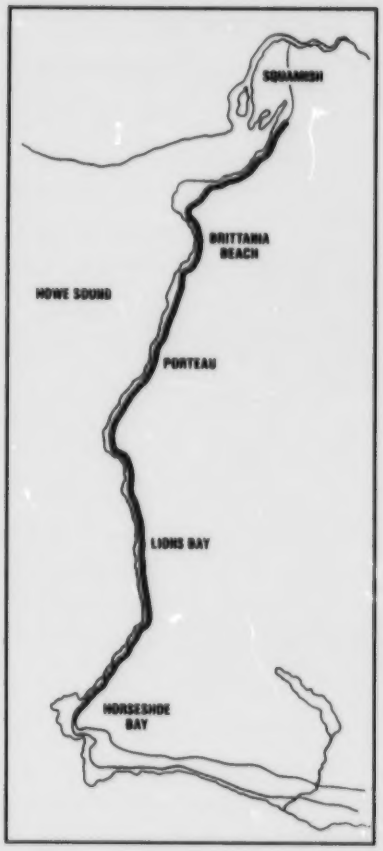
The Highway 91/91A project was estimated to provide 4500 person-years of direct employment.

Sea-To-Sky Project

The Sea-to-Sky project is an ongoing reconstruction project of Highway 99 from Horseshoe Bay to Whistler. The project was initiated in 1989 to:

- Address slide and flooding concerns along the route;
- Make the route more efficient as well as safer;
- Enhance the route to serve rapidly growing tourist travel;
- Encourage further development of the Whistler area; and
- Determine the feasibility of building an alternative route to Squamish.

This project is in the early planning phase. While selective construction activities are underway, full project scope and budget development will require much work before full project approval is sought.



Danger points are being attended to first and will continue to have priority.

In 1988/89 aging bridges were replaced with new, safer ones and in 1989/90 work began on the Brohm Lake to Culliton Creek portion which includes reconstruction of more than 7 km of Highway 99 as well as a concrete bridge.

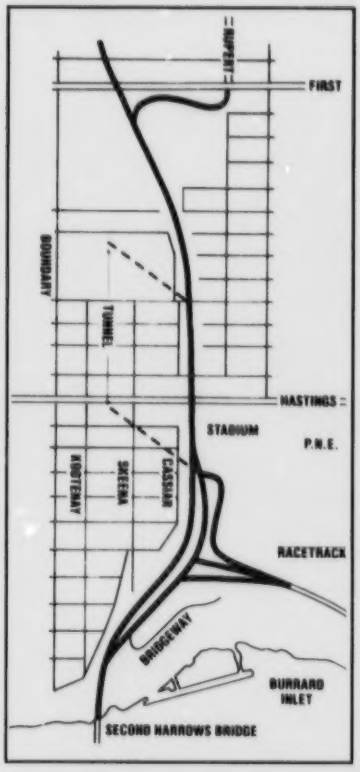
No estimate of construction cost or completion dates is available until more work has been completed on the overall scope of this project.

The Ministry is also conducting studies to identify alternate routes to the Whistler/Squamish area.

Cassiar Connector

This major project is being built to:

- Provide for the better movement of goods and people along the Trans Canada Highway between Vancouver and the North Shore as well as to provide access from the Trans Canada Highway to the Federal Port of Vancouver; and
- Relieve congestion at existing intersections currently crossing Cassiar Street.



The scope of the project involves:

- Upgrading 2.3 km of the Trans Canada Highway between the Second Narrows Bridge and the freeway in Vancouver to full freeway standard;
- Construction of two major interchanges as well as a 730 m tunnel for a section of the freeway to minimize impact on the community; and
- Rerouting the Rupert Park Diversion Road to the perimeter of the Park, thus returning this recreational area to its former size.

Some pre-construction work began in January 1990 with tendering for the major work well underway by the end of the fiscal year.

The Cassiar Connector is scheduled for completion in early 1992. Estimated cost is $102 million in 1989 dollars.

REHABILITATION - PROTECTING THE PUBLIC'S INVESTMENT

In the Spring of 1989, the Ministry took an inventory of the provincial highway and bridge system — 42,105 km of roads and 2,706 bridges.

It was found that:

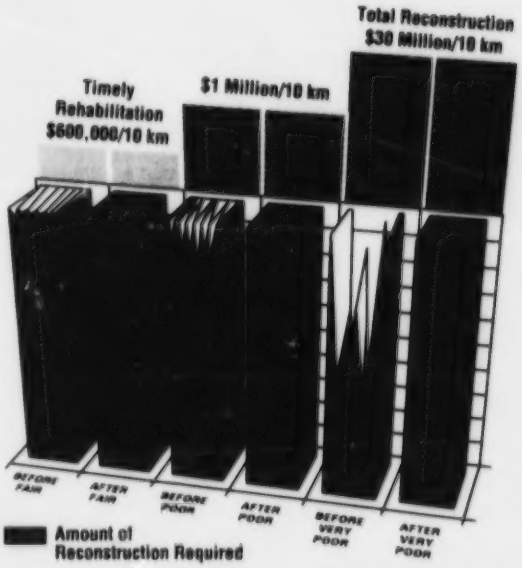
- Many of our highways are reaching or have reached their design life span and are deteriorating rapidly and losing their effectiveness;
- Increased traffic and axle loads are accelerating the wear on our roads;
- Many bridges are wood or at least 40 years old and will require replacement;
- Many bridges were built before today's earthquake-resistance standards were in place and need to be retrofitted; and
- Many bridges have load limits which restrict the efficient movement of goods.

As a result, a program for rehabilitation called "Good Roads Cost Less" was developed. (For a detailed description of Rehabilitation Program Elements see Appendix F)

Good Roads Cost Less

The "Good Roads Cost Less" program identified ongoing rehabilitation as the most effective, least costly way to restore roads and bridges and to prolong their useful life.

Roads nearing their design lifespan can be restored to almost new for about $600,000 per ten kilometres. Left to deteriorate further, the only choice is to reconstruct, which could cost five times as much.

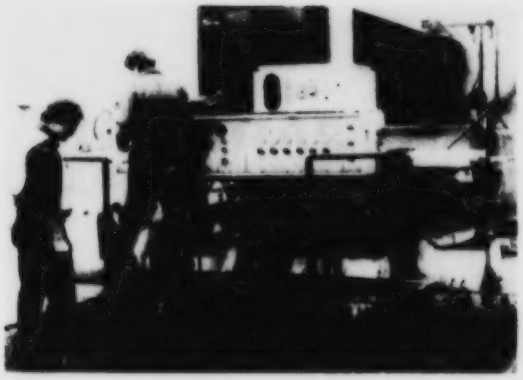


Rehabilitated roads also cost less for users. Experts say that poor highways could cost B.C. motorists an extra $165 million a year in wear and tear, replacement of parts and fuel consumption.

As well, good roads pose fewer safety hazards.

The "Good Roads Cost Less" program for rehabilitation suggested that for maximum effectiveness there was a need to:

- Repave about 1,000 km of highway per year into the foreseeable future;
- Upgrade the 24,000 km of secondary (gravel and earth) roads including widening, surface seals, all-weather access, better bridges, strengthening for increasing volumes of commercial traffic, realignment for safety and more efficient speeds;



A repaving project in progress.

- Replace 600 bridges that are made of wood or over 40 years old;
- Modify, strengthen or replace the 113 load-restricted bridges which affect the movement of goods;
- Resurface bridges on an ongoing basis as need is identified;
- Retrofit primary bridges built before modern earthquake-resistant design specifications were put in place to ensure critical emergency services have the freedom to move following an earthquake.

The 1989/90 Program

Recognizing the high-return investment of a timely program of rehabilitation, a budget of more than $154 million was approved, up 65 per cent over the 1988/89 budget of $93 million.

Expenditures for the year totalled $151,678,634.

Throughout the year:

- 1034 km of road repaved/rehabilitated
- 25 bridges replaced
- 64 bridges rehabilitated

A program to review structural and seismic capability of primary bridges has enabled the Ministry to initiate a retrofit/upgrading program. This will allow the Ministry to bring load capacities of older bridges up to modern standards and improve structural capability of older bridges to withstand earthquakes. This will begin in the 1990/91 fiscal year.

(For highlights on highway works by region and district see Appendix E)

ROAD AND BRIDGE MAINTENANCE

The employment of private-sector suppliers of road and bridge maintenance completes its first full year.

The benefits to the public at year-end:

- Equal standards in place for maintenance service on a province-wide basis;
- Regional businesses purchasing in the community;
- Creation of local employment opportunities; and
- Creation of a new revenue-producing industry;
- Increased tax base; and
- Lease revenue.

Maintenance services include practices such as pavement patching, snow removal, roadside mowing and brushing, litter collection, bridge cleaning and highway accident response. (For a complete List of Maintenance Services see Appendix G)

Public Safety

The Ministry continues to protect the public interest, making sure that maintenance contractors perform according to Ministry standard in each of the 28 contract areas in the province.

The issue of protecting public safety was addressed through:

- The stipulation that the private contractor offer employment to government workers who were already doing and were familiar with the job (almost 90% chose to work with the private sector — 2187 in total — and 10 out of 28 contract areas are served by ex-government, employee-owned firms);
- The development of strict, written maintenance standards that detail work to be done and maximum time within which it is to be done;
- The creation of a Quality Assurance Program, a reporting system that ensures that work is done to written standards; and
- The appointment of over 140 Area Managers to manage the Quality Assurance Program and oversee maintenance performance standards.

It was identified that the public perception of private-sector road and bridge maintenance was negative. The perception was that the private sector is motivated by profit, not to protect public safety.

Maintenance Contractor discussing road maintenance with one of the Ministry's Area Managers.

The Ministry's first concern when employing private-sector maintenance services was to ensure the safety of the travelling public.

Quality Assurance Program

For the first time in the history of the Ministry, detailed maintenance standards were set down in writing and a work-reporting system was developed to measure the quality of work performed.

Maintenance standards include annual as well as periodical (semi-annually, quarterly, etc.) maintenance jobs with guidelines for emergency response maintenance.

A simplified example of how the program works:

- Potholes are to be filled within 24 hours of a private-sector maintenance employee being made aware of them;
- If not done within the allotted time, the Ministry issues a nonconformance report that describes the job to be done and provides a deadline by which it should be completed.
- If the job is still not done, the Ministry will employ someone else to do the job and bill the maintenance contractor.

In the first year, the Quality Assurance Program worked to ensure public safety province-wide. However, it was found there was little incentive to perform better than standard. The Ministry identified this as an area for improvement when the next contracts are tendered in 1991.

Cost Savings

Before beginning the process to employ private-sector maintenance services, a study was conducted to find out if it would be cost effective.

It was estimated that direct and indirect benefits/savings would total $106 million dollars after the first three years.

This figure includes possible revenue gains in creating new businesses, lease of Ministry yards and equipment as well as the cost benefit of private- sector service versus the cost of the Ministry supplying the service itself.

What is not included is the savings in personnel and payroll service costs for fewer employees as well as in paperwork and payments to suppliers of maintenance materials.

As the contracts are for three years, a balanced accounting of the cost difference between private-sector and public-sector supplied maintenance services cannot effectively be generated until the end of the contract term, in the 1990/91 fiscal year.

Estimated Savings and Benefits of Highway Maintenance Privatization

	Restated Estimates 1988/89	Estimates 1989/90	Forecast 1990/91	Forecast 1991/92	Total 1988/89-1991/92
DIRECT SAVINGS	($ millions)				
Estimated Ministry Cost 1	297.69	322.49	338.59	213.31	1,172.08
Privatization Costs:					
— Ongoing Ministry Cost 2	193.62	75.73	79.52	50.10	398.97
— Highway Maintenance Contracts 4	108.30	252.71	246.10	144.48	751.59
Subtotal	301.92	328.44	325.62	194.58	1,150.56
Total Direct Savings	**(4.23)**	**(5.95)**	**12.97**	**18.73**	**21.52**
INDIRECT BENEFITS					
School Taxes	0.97	2.48	2.60	1.61	7.66
Motor Vehicle Licence Fees	0.23	0.58	0.61	0.38	1.80
Social Service Tax	0.62	1.55	1.55	0.93	4.65
Corporation Income Tax	0.21	0.54	0.57	0.35	1.67
Miscellaneous Benefits	1.18	2.56	2.68	1.65	8.07
Total Indirect Benefits	3.21	7.71	8.01	4.92	23.85
Total Direct and Indirect Benefits	**(1.02)**	**1.76**	**20.98**	**23.65**	**45.37**
REVENUE TO THE PRIVATIZATION BENEFITS FUND					
Asset Disposition Proceeds	28.29	3.28	0.18	-	31.75
Heavy Equipment Lease Payments	4.00	10.47	9.50	4.88	28.85
Total	32.29	13.75	9.68	4.88	60.60
Total Savings and Benefits to Government	**31.27**	**15.51**	**30.66**	**28.53**	**105.97**

1 Estimated highway maintenance cost if the Ministry of Transportation and Highways continued to provide the service. The 1988/89 estimated costs reflected partial year allocation of highway maintenance expenditures previously budgeted outside of the Highway Maintenance Program budget. The 1989/90 and subsequent years estimated costs are based on the 1988/89 estimate, assuming full-year reallocations, and inflated at five per cent per annum to reflect the British Columbia Government Employees Union settlement and general inflation.

2 These costs represent highway maintenance services which continue to be undertaken by the Ministry of Transportation and Highways.

3 Reflects a partial year only as contracts expire during 1991/92.

4 These amounts are the contracted cost of privatized highway maintenance services. Estimated ministry costs of providing the same level of service are: $104.07 million (restated estimates 1988/89), $246.76 million (estimates 1989/90), $259.07 million (forecast 1990/91), $163.21 million (forecast 1991/92), and $773.11 million (total 1988/89 - 1991/92).

PUBLIC CONSULTATION

Transportation construction affects many people. That is why consultation with the public is a major part of the planning process and why one of the Ministry's objectives is to communicate Ministry activities to the public.

This year a formal Ministry-wide public consultation process was implemented.

The public consultation component in any Ministry project is vital during the planning stage.

Working in the Community

The Ministry works with local government representatives on an ongoing basis as part of the provincial/regional transportation planning process.

Once a project has been identified and corridor options are produced the formal public consultation process begins:

1. At each stage of development, publicity describes the process and Ministry plans.
2. The Ministry takes project design option plans to local government representatives.
3. The Ministry gives notice to the public through the media about public information drop-ins.
4. Representatives of the Ministry attend these meetings and note public input for review.
5. In response to public input, further investigation and consideration of other options takes place.
6. As work proceeds, Ministry consultants are in touch with the affected public in an informal way, meeting with local residents and associations to hear their concerns.
7. Using public input, the plan is narrowed down to a single, detailed route.
8. Again, plans are presented to local governments and to the public through public information drop-ins where questions and concerns are heard and, if possible, responded to.

SAFETY INITIATIVES

Work continues to ensure the safety of highway users as well as pedestrians.

- All projects incorporate the latest in highway engineering techniques and construction materials to produce modern, safe highways.
- On an ongoing basis, accident-prone locations are identified around the province for use in planning and programming capital and rehabilitation improvements on existing highways.
- Research into improving road materials, curb design, lighting and even signage continues and a number of programs were initiated to enhance travelling safety along provincial highways.

Service and Attraction Signs

Last fiscal year, pilot projects involving new blue and white directional signs for service and attractions were put into effect in the Fraser/ Thompson Canyons and on Vancouver Island.

These new signs were to:

- Provide a provincial standard for "en route" tourist attractions and services such as gas, food, lodging, etc.;
- Create an easily recognizable and readable sign;
- Invite tourists to explore beyond provincial highways; and
- Clear up the confusion of signs at intersections that cause concern for user safety.

Following successful evaluation of the pilots, the program was implemented province-wide in 1989/90.

At the same time, the Ministry started to remove many unauthorized signs which have appeared on highway rights-of-way in recent years.

New blue and white directional signs for service and attractions on provincial highways.

Avalanche Management Program

Sixty areas around the province, along approximately 1200 kilometres of provincial roads, are prone to avalanches. To protect the travelling public, a Snow Avalanche Program is carried out in these areas to:

- Monitor the structure of snow packs;
- Monitor technical weather forecasts;
- Tabulate avalanche occurrences to aid in the process of forecasting avalanches; and
- Control avalanches by triggering small avalanches with explosives to prevent larger ones from occurring.

In the winter of 1989/90, avalanche activity was below average in the northern part of the province with higher than average activity in the southern sections in late January and early February. The total number of avalanches was 1642.

To enhance the Avalanche Program:

- Services provided to secondary hazard areas were increased through more intensive snowpack and weather monitoring;

Regional Snow Avalanche Technician performing weather observations on London Ridge near New Denver.

"Traffic for Kids" program in South Coast Region.

- Five additional remote-electronic weather stations were installed to complete a five-year project of installing 37 stations around the province. This improved information gathering system allows technicians to forecast avalanches more accurately.
- A customized computer program was added to the existing computer system which provides graphic representation of avalanche-related information to further assist the process of forecasting avalanches; and
- Ministry staff provided training sessions in avalanche awareness and safety and rescue measures as an essential part of the avalanche program.

Emergency Response Planning

The Ministry continues to improve its emergency procedures and communication of them to employees/public so that highway access is restored as quickly as possible when disrupted.

This year the Ministry is developing a multi-modal transportation emergency plan in preparation for a major earthquake. An interim plan has been completed and the operational aspects will be fleshed out in 1990/91.

Other Safety Initiatives in 1989/90

- Directing research into short-term methods for reducing accident experience on Route 99 (Squamish Highway) from Horseshoe Bay to Whistler.
- $1.1 million in safety improvements consisting of hazard elimination (i.e. relocating utility poles to meet modern safety standards nine metres from highway), intersection improvements, school route improvements and general safety works (enhance signing and highway geometrics, etc.).
- A video was produced for a program that teaches traffic safety to children – "Traffic for Kids". This program was successfully introduced to kindergarten and primary students in the South Coast Region school districts last year.

- Winter Roadshow, a campaign to encourage motorists to prepare their vehicle and change driving habits for winter, sponsored with the B.C. Road Builders & Heavy Construction Association and the Ministry of Solicitor General, Motor Vehicle Branch and Traffic Safety Directorate.

- Road Information Phone Number, a province-wide, toll-free number that motorists can call to hear the most up-to-date information on provincial roads.

- Rockslope Stability Assessment Program, a program to enhance the ability to predict rockslides that will help to reduce long-term maintenance costs as well as increase travelling safety.

- Full-scale crash testing of median and roadside barrier is currently underway to evaluate barrier strength, redirection capability and occupant risk.

- Updating of the Ministry's Construction and Maintenance Sign Manual is currently underway to facilitate uniform application of traffic control for provincial, municipal and utility operations.

- Yellow Clearance Arrows Program, continuing to put yellow arrows on all traffic lights with green-arrow, left-turn signals to provide motorists with a clearance interval before facing oncoming traffic. Forty are now operational, with 35 in the design or construction stage.

- Updating Traffic Controllers, a continuing program to replace fixed-time and obsolete traffic controllers to provide more reliable and timely response to vehicle and pedestrian traffic as well as connections to a computerized traffic management system in the future. The new traffic controllers are also less expensive to maintain.

- Snowplowable Centreline Reflectors, installed along Okanagan Connector to assist motorists to drive the route in areas susceptible to vision reduction. Also, helps to reduce long-term maintenance costs for the replacement of centreline reflectors that are periodically broken by snowplowing.

NEW MATERIALS AND PROCEDURES

Ministry employee testing the wearability of paint.

Testing is ongoing to find and develop new materials and procedures that:

- Cost less;
- Create less waste; and
- Enhance the effectiveness of the provincial road system.

Roadbuilding

- A new method of on-site repaving, heater scarification, that effectively recycles paving material is now being assessed. It involves lifting old pavement, reheating and relaying it.
- New construction procedures using pulp and paper industry residual material were developed in the blending of tall-oil pitch with asphalt cements. Pavement construction and evaluation on two projects in central B.C. have provided encouraging results. This procedure is aimed at replacing a percentage of the more expensive asphalt (petroleum derived) materials with a readily available recyclable product from the local pulp and paper industry.
- The public has asked for an alternative to concrete barriers along scenic areas so as not to obscure the view. Although there is no current alternative, firms working on projects with this potential issue have been asked to propose alternatives for review and approval.

- Trial field tests were performed using plastic fibres to replace steel mesh in concrete barriers in order to reduce costs of barrier construction.

- New high-mast lighting, requiring less steel poles is in use at Scott/Pattullo interchange in Surrey. Besides the safety benefit of less obstructions, it affords more uniform lighting, costs less to operate and is more aesthetically pleasing.

- A new material that has the potential to lower maintenance costs is being studied which, when sprayed on roadside structures such as concrete barriers, increases corrosion resistance.

Bridges

- A Series of Standard Pre-Engineered Bridges were produced to provide readily available designs at very low cost. The economy in design is further enhanced by duplication in production and reduced construction time.

- Studies on bridge-deck concrete, its production, handling and finishing, anticipates a 20 per cent increase in the service life of bridge decks.

- Concrete mobiles are now being used that provide concrete ready to be placed on bridge surfaces. The benefits include better quality concrete than usual with no waste, and higher production as crews no longer need wait for arrival of ready-mix trucks, both of which mean a cost saving to the public.

- Inclusion of steel fibres ir. concrete mix used to redeck bridges was performed in various locations to enhance bridge-deck performance.

Roadside Development

- A "Manual of Aesthetic Design Practice" is being compiled. When completed, this manual will serve to ensure highways that are not only functional, but are as attractive as they can be.

- Landscape architect services began to be included at the beginning of the preliminary design phase in the contracting of highway design work. This will ensure that highway construction does not mar the landscape.

- Lakeside pedestrian/bicycle walkways are being designed for several projects in the Okanagan Valley where existing shorelines will be altered by lake-fill sections. In these areas, the rock berm, which is installed to protect the road base from erosion by wave action, will be enhanced to allow walkways for safe and convenient public access to the lakeshore.

A new, efficient method of asphalt resurfacing/recycling – where pavement is heated, lifted, mixed with rejuvenating agent and relaid on site.

Procedures

- Development of a Pavement Management System was initiated. This will aid in the selection of what road should be repaved when, to implement the most cost-effective and timely pavement rehabilitation program.
- A province-wide Computer Data Base was developed and implemented for all Ministry-owned streetlights (over 15,000) to help ensure that B.C. Hydro and Ministry records agree and that the Ministry is being billed for the correct amounts. A similar project was initiated for traffic signal and other types of highway electrical installations.
- A Gravel Management System is being developed which will allow the Ministry to enhance its abilities to account for the amount of gravel used.
- An Aggregate Deposit Information System, an inventory system that will be used to support the Gravel Management System, was completed and now readily provides regional aggregate resource managers with information on gravel stock.
- Material Testing and Procedures Manuals were upgraded to allow staff to more effectively evaluate available and new materials/products which can be used to reduce costs without sacrificing quality.
- Standards were developed in the design, contracting and construction of bridges to establish consistency and economy in the production of bridges throughout the province.

PROTECTING THE ENVIRONMENT

The Ministry continues to give environmental assessment a high priority.

- Ongoing assessment of the performance of environmentally-friendly materials and their possible applications in highway construction and maintenance is carried out on a day-to-day basis.
- Paints, special rubber compounds and other materials are also continually assessed to identify their environmental impacts over the short- and long-term.
- Environmental studies are carried out as part of the process to identify a possible route for a new highway. The objective is to choose the best route — the one that will impact on the environment the least. In some cases, projects do not come forward as the economic and transportation needs are not great enough to warrant the effect on the environment.
- Environmental studies are also conducted during the planning phase of every project. These studies are assigned to consultants so there is no conflict of interest.

A total of 35 environmental studies was managed in the 1989/90 fiscal year.

Creating new marshland along Highway 16 east of Prince Rupert.

Wildlife fencing along Okanagan Connector.

Environmental Mitigation

Environmental works to mitigate the effect of construction are also carried out around the province.

Environmental works this year were carried out on major projects, the Vancouver Island Highway Project, Okanagan Connector, Okanagan Highway, Highway 99, and the Fraser River Crossing and Connections, as well as a number of regional projects.

Examples of some of the Ministry's environmental mitigation works follow.

Vancouver Island Highway

Between Parksville and Campbell River, more than 16 environmental consultants worked to establish an environmental inventory. This inventory will assist the Ministry in establishing preferred corridor options and developing mitigation measures. One of the main objectives is to protect fish habitat and migration routes for more than 67 stream and river crossings.

Okanagan Connector

Protecting migrating wildlife is a major concern along the Okanagan Connector.

To prevent wildlife collisions, special wildlife fencing and one-way gates were developed and installation began. The gates allow moose and deer that enter onto the highway to escape outside the right-of-way. This fencing will run on both sides of the highway along 84 kilometres of the route, from Aspen Grove to the Highway 97 intersection.

For the third year, migration movements of radio-collared deer and moose were monitored. The first two years of monitoring was to establish migration movements to identify where to place wildlife crossing structures which will mitigate the effect of the highway on migrating animals. Monitoring continues to assess the effectiveness of the wildlife fencing and one-way gates.

Okanagan Highway 97

Wildlife fencing was planned between Deep Creek and Bentley Road.

Sea-to-Sky Highway 99

The Ministry worked with Fisheries and Oceans, Canada to ensure that construction waste rock was disposed in Howe Sound to enhance fish habitat along the shoreline.

Fraser River and Crossings

For the third year, the Ministry continues to monitor the impact of the Alex Fraser Bridge on salmon migration. It is also to assess the effect of mitigation work to provide low velocity areas along the shoreline which were lost due to the construction of the bridge structures which narrowed the river.

Along the Richmond Freeway, a unique system was designed to prevent leaching of road material into the municipal ditches. Bullrushes and grasses were

planted along 80 m of the route. The plants provide a natural filtering system with the ability to absorb and effectively cleanse runoff water of any possible leachate from the road before it runs into municipal ditches.

Region Projects

- Kyhex-Aberdeen Project - Widening along Highway 16 east of Prince Rupert impacted on established marshland. The Ministry compensated with the development of a new and larger marshland area.
- Cambie/Malakwa Project - To mitigate encroachment into the Eagle River due to the Trans Canada Highway widening near Sicamous, the Ministry created three large fishery ponds for migrating salmon.
- Tsawwassen Project - The Ministry delayed the widening of Highway 17 near the Tsawwassen Ferry Terminal to allow for and to participate in an archaeological salvage at the site.
- The Ministry works with a Wildlife Collision Committee in the Kootenays to identify and implement ways to prevent wildlife collisions. This year, input from this committee resulted in the Ministry installing 500 deer reflectors on the road shoulder along Highway 3, 95 and 95A near Cranbrook. The success of this committee has led to the establishment of a similar committee in the Princeton area.

Cattle underpass along the Okanagan Connector.

INLAND FERRIES

The Ministry is responsible for 16 freshwater ferry routes in the province which provide an integral link in the province's transportation network.

The freshwater fleet consists of seven certified vessels, six reaction ferries, four aerial ferries (for winter use) and four cable ferries as well as tugboats and barges.

The fleet carried more than 4.7 million passengers and 2.4 million vehicles this year..

During the 1989/90 fiscal year the following initiatives to enhance service were carried out:

- A larger ferry (ex-Robson ferry refitted) was put into service in April 1990 on the Arrow Park route across the middle Arrow Lake. This increased capacity from eight vehicles to 28 and provided the ability to handle two loaded logging trucks.
- MV Galena on the Upper Arrow Lake Ferry route, was extended to increase automobile capacity from 42 vehicles to 50 with an improved landing system.
- Plans were completed and machinery purchased for a 40 automobile cable ferry to replace the 28 automobile vessel MV Needles on the Needles/Fauquier route across the middle of Arrow Lake.
- The former MV Needles, renamed the MV Shelter Bay, will be placed on the Galena Bay route as a summer addition only, to enhance service during peak travel time.
- Plans are to do alterations to all Arrow Lake ferry landings so that the MV Shelter Bay can be utilized to relieve any route experiencing operation problems or high demand.

"The Omenica Princess" Francois Lake Ferry docking.

At the wheel of the "The Omenica Princess".

- The Natural Gas Project on the Albion Ferry route, to pilot the use of this cleaner fuel on inland ferries, was advanced with the natural gas conversion of the MV Kulleet's generators and heating system.
- In response to customer demand, Albion Ferry service was extended from a 20 hour to a 22 1/2 hour service.

Expenditures to operate and maintain the fresh-water ferries in 1989/90 were $12,431,373. (For a breakdown of expenditures see the Financial Statements Section)

COMMUNITY SUPPORT PROGRAMS

The Ministry continues to support communities around the province to:

- Develop and maintain their arterial and secondary road systems;
- Build or restore bridges; and
- Build and develop community airports.

A number of community support programs has been implemented to encourage development of local transportation systems, including community airports, secondary highways and bridges, to provide better service to the public and to enhance the provincial transportation network.

The Air Transport Assistance Program

The provincial Air Transport Assistance Program was implemented in 1978:

- In recognition of the vital role that air transportation plays in all facets of our economy;
- To encourage scheduled and charter air services into areas which were not linked to major communities by air;
- To improve access to remote communities;
- To provide for air ambulances and forest fire-fighting protection in communities around the province;
- To support local economic development, such as mining, forestry and tourism; as well as
- To fund needed technological advances to improve safety in community airports.

In 1989/90, ATAP provided 19 capital funding grants totalling $3,146,500 to British Columbia communities for projects such as:

- The first phase of a new airport at Bob Quinn Lake, needed to support the extensive air freight requirement of natural resource developments in the area;
- Continued work on a new airport in the northern Queen Charlotte Islands near Masset, which is needed to serve the growing tourism market of the area.
- The first phase of an eight community network of helicopter medevac landing pads in the Prince Rupert area;
- Reactivation of the Barkerville Airport; and
- A number of runway paving projects and other minor works at various locations.

(For a complete list of grants provided and projects supported by ATAP see Appendix H)

A brochure and application guideline handbook were printed to fully explain the program and to assist communities in preparing submissions to seek financial support for projects.

Secondary Highway Program

This program provides support so that communities do not carry the full burden of costs for upgrading and maintaining municipal road systems that serve as major transportation routes through a municipality.

Throughout the province, there are approximately 105 secondary highways within 61 municipalities.

Under Part 3 of the Highway Act, municipalities are entitled to 50 per cent of capital construction costs and 40 per cent of maintenance costs (75 per cent for both capital and maintenance in a municipality with a population under 1,000).

Secondary highway projects supported by the Ministry include curb and gutter installation, enclosed draining, repaving, median installation, etc.

The Ministry assisted 62 municipalities this fiscal year and approved financial assistance totalling $4,152,085 through this program in the 1989/90 fiscal year: $3,510,945 for construction and $641,140 for maintenance.

(For a detailed list of all projects supported by the Secondary Highway Program see Appendix I)

New Incorporations and Municipal Restructures

In support of newly incorporated municipalities or municipalities extending their boundaries, the Ministry offers support in maintaining and reconstructing roads and bridges before turning over responsibility for operation to the community.

The Ministry assisted nine municipalities this fiscal year and approved financial assistance totalling $2,512,009.

Logan Lake	56,834
Metchosin	126,667
Colwood	145,000
Abbotsford	15,000
Sechelt	179,000
Anmore	15,500
Sicamous	221,852
Salmon Arm	34,656
Kelowna	1,717,500
TOTAL	**$2,512,009**

Bridge Assistance Contributions

This program has assisted three municipalities this year in the cost of rehabilitating and building bridges to enhance their municipal road systems.

In the 1989/90 fiscal year, the Ministry provided a total of $489,939 through this program. The municipalities that received funding are:

City of Prince George	221,939
City of Kamloops	258,000
City of Quesnel	10,000
TOTAL	**$489,939**

APPENDIX A

Accounting of Ministry Highway Works Performed 1989/90	
Total km of new road added to system	167
Number of bridges added to system	11
Number of bridges rehabilitated	64
Number of bridges replaced	25
Total km of roads repaved/rehabilitated	1034
Total km of existing road realigned	128
Total km of existing road widened	136

APPENDIX B

RISP

Registration, Identification, Selection and Performance Evaluation (RISP), is a computerized system of handing out Ministry work to engineering firms throughout the province.

It works as follows.

1) Engineering firms are registered in categories of work and adjudicated in these categories according to past performance. This information is placed in the RISP computer.
2) As jobs are identified, engineering firms (usually three) are invited to send in a proposal. Firms are invited to bid on a rotational basis, all are given fair access to Ministry business.
3) Proposals are forwarded to the Ministry in two sealed envelopes: 1) technical information; and 2) estimated costs.
4) The technical information is reviewed first and a qualified firm selected.
5) The selected firm's estimated costs are considered and a process of negotiation follows to determine the contract amount.
6) Price is agreed upon and a contract signed.

Hiring Local Equipment Policy

This policy provides guidelines for hiring local equipment in the regions.

It works as follows:

1) District highways offices annually compile a list of local equipment for hire. This list is adjudicated according to past performance and divided into two lists: 1) Primary; and 2) Open. For dump trucks there is a third list: Secondary.
2) All equipment is inspected to determine its suitability for hire.
3) Available work is offered first to the Primary List and is rotated (following the list) on a project by project basis until the equipment has reached 300 hours of work (600 for dump trucks).
4) Then work is offered to the next list on a rotational basis until the equipment has reached 300 hours, and so on.

APPENDIX C

CAPITAL CONSTRUCTION PROGRAM ELEMENTS

The following are Capital Construction Program elements.

Building New Roads

Building New Bridges

Building New Inland Ferries and Facilities

Major Upgrading to Existing Roadways

- Widening of Roads -
  Projects that widen existing roads from two to four lanes.
- Widening of Bridges -
  Projects that widen existing bridges to provide more than two lanes.
- Replacement of Bridges -
  Projects that involve the replacement of two-lane bridges with larger bridges.

Major Paving of Existing Gravel Roads

Municipal and Community Grants

- See Community Programs Section of Annual Report

APPENDIX D

BRIDGES COMPLETED

Alderbridge Way Overpass	New	No. 5 Road Overpass	New
Hermes Flyover	New	Brookmere No. 2	Replaced
Blackwater River Bridge	Replaced	Bear Creek Bridge	Replaced
Bonaparte No. 4 Bridge	Replaced	Cayoosh Creek Bridge	Replaced
Deadman Creek Bridge No. 6	Replaced	Deadman Creek Bridge No. 7	Replaced
Devoin Creek Bridge	Replaced	Drought Hill Overpass	New
Elkford Bridge	Replaced	Fortune Creek Bridge No. 2	Replaced
Jones Creek Bridge	Replaced	Jackson Bridge	Replaced
Knight Street Overpass	Replaced	King George Flyover	New
Lonetree Bridge	Replaced	Miller Creek Bridge	Replaced
Morrison South Bridge	Replaced	Porcupine Bridge	Replaced
Pothole Creek Bridge	New	Rennison Bridge	Replaced
Webb Bridge	Replaced	Sliammon Bridge	Replaced
Spraggett Bridge	New	Trout Creek Bridge	Replaced
Trepanier Ungulate Underpass	New	Trepanier Bench Road Overpass	New
Van Horlick Bridge	Replaced	Clear Creek Bridge	Replaced
West Kettle River Bridge	Replaced	Anik Overhead	New
Annacis East Pedestrian Ramp	New	Little Slocan Bridge	Replaced

APPENDIX E

HIGHLIGHTS OF REGION AND DISTRICT ROADWORKS 1989/90

REGION 1 - SOUTH COAST, Office located in Burnaby

Development Approval Statistics for South Coast Region 1989/90	
Controlled access permits to provincial roads issued	106
Ordinary access permits to provincial roads issued	542
Rezoning applications within 800 m of numbered highways	446
Other permits for works within highway rights-of-way including utilities, pipelines, signs, parades, etc.	829
Subdivisions (Final)	196
Lots created (Final)	905

Region Roadworks 1989/90

North Vancouver, Upper Levels Highway: Replaced congested at-grade, signalized Lonsdale Intersection with a safer and higher capacity interchange. Part of long-range plan to upgrade Trans Canada Highway to freeway standard.

Surrey, Scott Road: Replaced the interconnection at King George Highway with a safer and higher capacity interchange to better access Scott Road Sky Train Station and parking facilities.

North Vancouver, Dollarton Highway: Reconstructed 6.1 km to improve road to a modern, urban standard.

Delta, Nordel Way Extension: Constructed 9 km of four-lane road. Part of commitment to meet the needs of expanding population using the Alex Fraser Bridge.

Langley, 200th Street, 64th Ave. to 72nd Ave.: Continuing to improve safety and carrying capacity by widening to four lanes plus left-turn lanes at intersections.

Chilliwack area, Trans Canada Highway: Three new interchanges to improve public safety with the elimination of at-grade crossings. Part of long-range plan to upgrade Trans Canada Highway to freeway standard.

Sunshine Coast, Secret Cove, Highway 101: Upgraded 2.7 km to improve horizontal/vertical alignment for safety and travelling efficiency. Continuation of Highway 101 upgrading program.

Delta, Tsawwassen Highway 17: Causeway being widened to four lanes with additional eastbound lane to 56th Street (4.7 km). Intersections at 52nd Street and 56th Street will be signalized.

Delta/Richmond, Massey Tunnel: Electronic counterflow installed in both tubes to provide three lanes of traffic northbound in the morning and three lanes southbound in the afternoon. Extra lane handles approximately 1,400 vehicles every hour and improves flow of rush-hour traffic.

New Westminster/Surrey, Pattullo Bridge: Pier and concrete girder repairs and bearing replacement plus seismic restraining ties at Piers 17 and 18 of the south viaduct spans. Other aspects of this major rehabilitation project will continue over eight years.

Safety Initiatives

Children's Traffic Program - A video was produced for the "Traffic for Kids" program which was successfully introduced to kindergarten and primary students in the South Coast Region school districts last year.

Protecting the Environment

Tsawwassen Highway 17 - Delayed construction for two months to give archeologists time to complete a dig in the area. As construction commenced, an Indian burial site was uncovered and an access road was realigned to avoid and preserve the site.

Public Consultation

Number of public information drop-ins prior to finalizing plans. Examples: Vedder/Trans Canada interchange drop-ins, several open houses prior to Cassiar Connector project even announced, and Westview interchange.

Lower Mainland District, Office located in New Westminster

District Roadworks 1989/90

New Westminster, McBride Blvd., Route 1A/99A: Added one lane and signal operation at 10th Avenue plus 0.5 km of curb and gutter.

Vancouver, Chancellor Blvd.: Curb and gutter along 1.1 km in University Endowment Lands.

Surrey, Route 10 at 144th Street: Designed intersection and signal improvement in support of new Justice Centre.

Surrey, King George Highway at 152nd Street: Intersection improvements to enhance safety and carrying capacity.

Surrey, Route 15: Repaved 5.01 km from Route 10 to 32nd Avenue.

Surrey, Eighth Avenue: Repaved 1.53 km from Route 15 to Route 99.

Provincial Transportation Planning

Funding provided for constructing and improving bus stops along provincial routes in Surrey to encourage transit use.

Safety Initiatives

Installed fluorescent orange pickets on Route 99 on-ramp at the King George Highway Interchange.

Installed chain-link fencing along Routes 1 and 99 to discourage pedestrian and animal crossing.

Guardrail flare and median barrier installation on Route 99.

Eliminated unsignalized left turns crossing three lanes on the Lougheed Highway: Burnaby, Coquitlam.

Howe Sound District, Office located in North Vancouver

District Roadworks 1989/90

North Vancouver, Taylor Way: Provided left-turn lanes at Keith Road and Inglewood Avenue for safer and more efficient travel.

Gibsons, Joe Road: Realigned to eliminate a sharp curve and widened 0.8 km to improve safety.

Powell River, Brew Bay Road: Widened 1.1 km to improve travelling safety.

Gibsons, Brooks Road: Realigned to eliminate a sharp curve and widened plus regraveled 1.2 km.

Pemberton, Portage Road: Reconstructed shoulders and paved 2.7 km for improved surface and safety.

Pemberton, Miller Creek Bridge: Replaced old structure with new bridge.

Powell River, Sliammon Bridge: Replaced old structure with new bridge.

Bowen Island, Dorman Road: Widened and graveled for improved safety.

Powell River, Crowther Road: Widened and graveled 2 km for improved safety.

Fraser Valley District, Office located in Sardis

District Roadworks 1989/90

Silverhope, Trans Canada Highway, Exit 168: Constructed westbound off-ramp to improve access to Silverhope from the freeway.

Hemlock Valley, Morris Valley Road: Completed rock cuts and placed rock in new sub-grade, plus minor realignment and widening 1.8 km. Part of project to realign and widen road to provide safer access to Hemlock Valley ski area.

Hope, Silver Skagit Road: Replaced log stringer bridge in poor condition to provide better access to logging and recreation areas.

Abbotsford, Highway 11 at Vye Road.: Constructed opposed left-turn slots on Highway 11 and paved.

Provincial Transportation Planning

Complete paving of east shoulder of Highway 9 in the Village of Harrison Hot Springs for bicycles.

Safety Initiatives

Ongoing program to relocate poles away from the westbound lanes of the Trans Canada Highway between Vedder Canal and Highway 11.

Fraser Canyon Tunnel relight project to increase light levels for improved visibility.

REGION 2 - THOMPSON-OKANAGAN, Office located in Kamloops

Development Approval Statistics for Thompson-Okanagan Region 1989/90	
Controlled access permits to provincial roads issued	120
Ordinary access permits to provincial roads issued	1,153
Rezoning applications within 800 m of numbered highways	310
Other permits for works within highway rights-of-way including utilities, pipelines, signs, parades, etc.	1,479
Subdivisions (Final)	285
Lots created (Final)	911

Region Roadworks 1989/90

East of Kamloops, Trans Canada Highway, Barnhartvale to Campbell Creek: Design and property acquisition for 9.3 km of four-lane highway complete with collector roads, pedestrian overpasses and Kipp Road vehicular overpass. Part of ongoing project to widen highway for safety and travelling efficiency.

Salmon Arm, Trans Canada Highway, Hospital Road to Highway 97B: Design and property acquisition for 4.9 km of four-lane highway complete with frontage road system and a grade-separated interchange at Highway 97B. Part of ongoing project to widen highway for safety and travelling efficiency.

East of Salmon Arm, Trans Canada Highway, Canoe to Annis Bay: Design and property acquisition for 10 km of four-lane highway. Part of ongoing project to widen highway for safety and travelling efficiency.

Raleigh to Heffley Creek, Highway 5: Commenced 11.1 km of four-lane highway complete with collector roads. Part of ongoing upgrade of highway to Heffley Creek.

East of Chase, Squilax Bridge: Replaced old wood bridge with two-lane steel and concrete structure.

Ashcroft, Ashcroft Bridge: Replaced old bridge with new steel girder, concrete deck structure.

East of Kamloops, Trans Canada Highway, Campbell Creek to Monte Creek: Design underway for 9.5 km of four-lane highway including the interchange at Highway 97. Part of ongoing project to widen highway for safety and travelling efficiency.

100 Mile House area, Highway 97, 86 to 93 mile: Construction undertaken to widen 8.9 km to four-lane highway. Part of program to improve highway in the area.

Trans Canada Highway, Salmon Arm to Tappen, Junction 97B to Canoe, and miscellaneous roads: Mill and repave/recycle 22.8 km of pavement.

Osoyoos to Gallagher Lake, Highway 97: Mill and repave/recycle pavement along 19.4 km. Ongoing strategy of recycling pavement.

Trans Canada Highway, Valleyview Drive to Dallas Drive: Mill and repave/recycle asphalt pavement along 13.8 km.

Kelowna, Big White Road: Resurfaced 2.8 km and paved 12.6 km of gravel road.

Highway 33, McCulloch Road to McKenzie Road: Mill and repave/recycle pavement along 36 km.

Princeton, Highway 3, Sunday Summit to Similco Mine and Highway 5A north: Hot, in-place reprofiling of pavement along 20.6 km of Highway 3 and 1.5 km of Highway 5A.

Highway 6, Inanoaklin Crossing to base of Mine Hill: Hot, in-place reprofiling of asphalt pavement along 31.8 km.

Protecting the Environment

Completed the second stage of a three-stage plan to place wildlife fencing on Phase 2 of the Coquihalla Highway.

Landscaped Columbia Street Interchange in Kamloops.

Okanagan Shuswap District, Office located in Vernon

District Roadworks 1989/90

Salmon Arm, Sunnybrae Canoe Pt. Road: Regraded 1 km to handle increased residential and tourist traffic and to improve safety.

Anglemont, Squilax-Anglemont Road: Regraded 1 km to handle increase in traffic along north shore of Shuswap Lake.

Sorrento, Eagle Bay Road: Regraded 1 km to improve road width and alignment for increase in traffic.

Lumby, Creighton Valley Road: Regraded 1 km to improve road width and alignment for safety and increase in residential and logging traffic.

Lumby, Harris Creek Road: Realigned and widened 1 km for safety and increase in residential and logging traffic.

Enderby, Fortune Bridge Project: Replaced timber structure with a concrete structure to provide a safe crossing for a large rural agricultural area.

Enderby, Grandview Bench Road: Regraded 1 km to improve driving safety and prepare for graded seal.

Lumby, Rawlings Lake Road: Regraded 1.2 km to improve safety for farm, residential and logging traffic.

Vernon, Keddleston Road: Regraded 1.2 km for safety of increased residential traffic.

Enderby, Mallory Road: Graded 1 km for safety of increased farm and residential traffic.

Safety Initiatives

Left-turn lanes on 97A at Lansdown and Powerhouse in Armstrong.

Left-turn lanes at Trans Canada Highway and 30th Street where they intersect in Salmon Arm.

Guardrail installation in various locations around the district.

Protecting the Environment

Fencing along Highway 97A and Highway 6 to keep livestock off road.

Nicola District, Office located in Merritt

District Roadworks 1989/90

West of Logan Lake, Tunkwa Lake Road: Ongoing program of improvements continued with realignment of 3.6 km to provide safe access to the juvenile correctional facility and summer resorts.

Southwest of Merritt, Brookmere Bridge and Approaches: Two new bridge sites constructed on Coldwater Road leading to the community of Brookmere to improve safety and stimulate economic development.

Brookmere, Brookmere Bridge #2: Replaced old bridge with new crossing structure.

North of Merritt, Douglas Lake Road: Resurfaced 5 km with graded seal to improve the ride and reduce maintenance.

North of Merritt, Pennask Road: Realigned and regraveled 2 km to provide more efficient access for resource industries.

West of Merritt, Petit Creek Road, Canford Bridge: Replaced old bridge with new crossing structure.

East of Merritt, Mill Creek Road, Connant Bridge: Replaced old bridge with a multi-plate culvert.

Protecting the Environment

In cooperation with Ministry of Environment, enhanced design and construction in our bridge rehabilitation program to better protect valuable fish-rearing habitats.

Continuing program to "landscape" abandoned gravel pits.

Public Consultation

With advice from the local community, made improvements to the local industrial road network and a major school route.

Safety Initiatives

Improvements made to major school route along Voght Street in Merritt: A concrete lock-block wall was installed to widen the street to allow for safer movement of school children; and existing pole lines were relocated along the street to prevent possible collision situations.

Merritt, Nicola/Houston Intersection: Left-turn lanes to increase capacity and improve safety on industrial road network within the city.

Thompson District, Office located in Kamloops

District Roadworks 1989/90

Clearwater, Clearwater Valley Road: The Wells Gray Park corridor was realigned and sealcoated (9 km) to improve access for increasing tourist traffic.

Tod Mountain, Tod Mountain Road: Upgraded and widened 7 km in preparation for paving. Part of project to provide better access to ski area.

Barrier/Louis Creek, Agate Bay Road: Upgraded 3 km to a proper width and gravel standard in preparation for future paving. Part of project to improve access to mining, logging and recreational areas.

Savona, Deadman Br. #6 and #7: Replaced log stringer bridges with new crossing structures.

Blackpool, McLure, Vinsulla, & Pinantan areas: Approximately 23 km of sealcoating on various side roads to improve the riding surface and extend the life of the road.

Safety Initiatives

Enhanced signing from west scales to Columbia Street exit on Trans Canada Highway.

Installed a more level gore area at Columbia Street exit on Trans Canada Highway, including extending guardrail and placement of 11 impact attenuators.

Upgraded truck runaway lane along Trans Canada Highway by increasing sight distance, widening road surface, and installing delineators and an arrester bed.

Protecting the Environment

Installed a cattlepass 34 km west of Little Fort on Highway 24.

By widening and placing topsoil for 0.5 km downstream next to Lac Des Rouches, provided wildlife easier access to lake.

Public Consultation

In response to public input, installed a pullout off Yellowhead Highway 5, 4 km north of Kamloops, as a location for city map.

South Okanagan District, Office located in Penticton

District Roadworks 1989/90

Okanagan Falls, Okanagan Highway 97: Widened and repaved 907 m for safety and travelling efficiency and added curb, gutter and sidewalk.

Kelowna, Westside Road: Widened and realigned approximately 2 km.

Osprey Lake area, Princeton-Summerland Road: Widened and repaved 5 km for safety and travelling efficiency.

Winfield, Okanagan Centre Road: Reconstructed and paved 4 km.

Princeton, Peterson Bluffs, Coalmont Road: Rock blasting and removal on Bluffs as well as widening and graveling 2 km north.

Westbank, Gellatly Road: Regraveled and paved approximately 1.5 km.

Penticton, McLean Creek Road: Realigned, regraded and paved approximately 2 km for travelling safety and efficiency.

Naramata, Partridge Road: Widened and repaved approximately .5 km including construction of a retaining wall for travelling safety.

Oliver, MacDonald Bridge: Replaced old, timber structure with new crossing structure.

Safety Initiatives

Shoulder widening and paving in three locations in Kelowna and Princeton to improve safety for children walking to school.

Initiatives were started at Highway 97 in Westside (Kelowna) and Highway 3 east of Osoyoos, to install median barriers. Highway 97 installation is to reduce head-on accidents and Highway 3 installation is to assist runaway trucks on a sharp curve.

Protecting the Environment

Fencing projects to keep ranging cattle off the highway system, were completed in a number of locations along Highway 3 and Highway 97.

South Cariboo District, Office located in 100 Mile House

District Roadworks 1989/90

100 Mile House, Exeter Station Road: Widened and repaved 2.4 km, to improve safety and service level.

North of Cache Creek, Highway 97, Bonaparte River Bridge: Realigned 2 km and constructed a new, wider bridge to bring this section up to current standards and improve safety and service level.

Lillooet area, Texas Creek Road: Road base reconstruction and drainage improvements to rehabilitate deteriorated roadway.

Lillooet area, Road #40, Jones Creek Bridge: Bridge replacement to improve alignment and replace deteriorating structure.

Cache Creek area, Highway 12, Jackson Bridge: Constructed new bridge structure.

Lac la Hache, Murphy (Dry) Creek: Replaced -old, wooden bridge with a large-diameter pipe.

100 Mile House area, Exeter Station Road: Extension (construction and paving) of road by 0.9 km to better access current and future industrial development area.

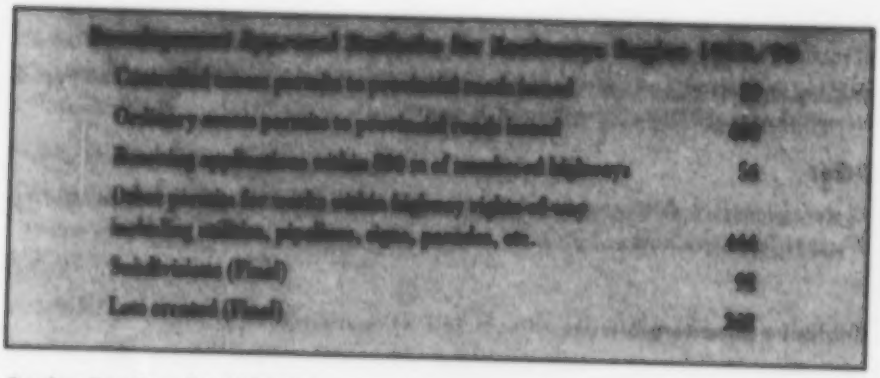
Safety Initiatives

BC Rail crossing on Exeter Station Road in 100 Mile House was upgraded. Road alignment and intersection adjacent to crossing were improved to provide safe crossing angles and sight distances. Automated crossing signals were installed to replace existing stop signs.

Other Initiatives

Experimental test section of Highway 97 constructed with Roller Compacted Concrete, using various combinations of cements. Test section will assess wearability of this material as a surface course, as well as structural integrity and resistance to deformation.

REGION 3 - KOOTENAYS, Office located in Nelson



Region Roadworks 1989/90

Cape Horn Bluffs, Highway 6 - Realigned and widened to two lanes 6 km to improve travelling safety.

Trail, Highway 22: Construction began on 3 km of new highway into Trail to alleviate congestion and improve traffic flow.

Vallican, Little Slocan Bridge: Two-lane concrete bridge to replace high-maintenance, single-lane Bailey bridge and 1.6 km of two-lane gravel road.

East of Creston, Highway 3: Recycled and paved 34 km of road, Kidd Creek to Irishman Creek Bridge.

East of Osoyoos, Highway 3: Recycled and paved 29.28 km of road from East Boundary Region to Rock Creek.

West of Creston, Highway 3: Recycled and paved 14.53 km of road from Blaze Creek to Old Kootenay Channel Bridge.

West of Revelstoke, Highway 1: Recycled, paved and shoulder paved 16.10 km of road from Camp Creek Bridge to Clanwilliam.

Protecting the Environment

Regional staff met with Adams Logging to establish leave strips for visual aesthetics along Highway 1, west of Donald.

The Hydroseeding Program continued in the region, treating erosion susceptible slopes and refertilizing vegetation established slopes.

Continued to review and test new market products related to road snow removal, prevention of winter sand stockpile freeze ups and new methods and/or products to handle our Weed and Herbicide Programs.

Safety Initiatives

Audio-signal installations on Highway 3 through Creston and yellow arrow upgrades at two locations in Cranbrook.

Lighting installed at Highway 3 and 68th Avenue and Spragget intersections near Grand Forks.

Public Consultation

Required full public involvement program in Donald-Yoho Corridor study on Trans Canada Highway.

Held two seminars with municipalities and regional district to review and explain cost sharing, revenue sharing and Major Street Network Programs.

Other

Upgraded a number of rest areas to include concrete table pads, handicapped tables and general cleaning of trees and brush.

Kootenay Boundary District, Office located in Grand Forks

District Roadworks 1989/90

Grand Forks, Spraggett Road Connector, between Highway 3 and Almond Garden: New road, 0.8 km long and bridge to provide easier access to rural/farm lands.

North of Rock Creek, Christian Valley Road: Reconstructed and repaved 4 km. Part of ongoing project to improve this road to efficiently handle increasing truck and residential traffic.

Grand Forks, Carson Road: Widened, graveled and paved 1.2 km to eliminate spring weight restrictions.

Safety Initiatives

Machine brushing of 15 km of Champion Lakes Road to improve visibility.

Installed guardrail at various locations.

Repaired livestock fencing at various locations.

Central Kootenay District, Office located in Nelson

District Roadworks 1989/90

Cape Horn Bluffs, Highway 6: Realigned and widened 6 km to two lanes to improve travelling safety.

Rosebery, Highway 6: Realigned 0.8 km to improve travelling safety and efficiency.

Edgewood, Highway 6: Realigned 3 km to improve travelling safety and efficiency.

Ymir area, Wildhorse Road: Widened 1 km.

80 km North of Creston, Riondel Road: Eliminated a sharp curve.

Salmo, Porcupine Bridge: One-lane bridge was built over Salmo River to provide access to a residential area.

Slocan City, Slocan Floating Foot Bridge: Installed a floating pedestrian bridge over Slocan River to temporarily replace an old truss bridge and provide access to a residential area.

Transportation Planning

Initiated an independent examination of the Kootenay Lake Ferry route to look into making it shorter and more efficient.

Requested a detailed planning analysis of Highway 3, Salmo to Creston section (Kootenay Pass) to look specifically at possible action to reduce avalanche hazards along this route.

Public Consultation/Safety Initiatives

Liaison with Tarry's School Principal and Parent Group resulted in installation of the first "Special Crosswalk" on a provincial highway, on Route 3A at Shoreacres (between Nelson and Castlegar).

Protecting the Environment

To alleviate distress to a nearby resident suffering from emphysema, responded with road stabilization and watering on the Kaslo Airport Road. (A Ministry truck haul operation from a nearby gravel pit had aggravated the dust situation.)

East Kootenay District, Office located in Cranbrook

District Roadworks 1989/90

McGinnus Hill, Highway 3: Completed construction and paving on 1.8 km.

Fernie area, Highway 3: Built tunnel passing lanes and paved Johnny Dee Corner, 1.6 km.

Invermere area, Road #3: Strengthened road base and paved 0.8 km.

Kimberley area, Torrent Road: Replaced bridge and rebuilt approaches to Skookumchuck Bridge.

Jaffrey area, Grassmere Dorr: Strengthened road base and graveled 6 km.

Kimberley area, Skookumchuck Bridge: Replaced old bridge.

Cold Creek, Frees Bridge and Bull River, Pipe Trestel Bridge: Replaced.

Mission Wycliffe, Yahk Meadow Creek, Fernie Park Road, 17th Avenue: Replaced old bridges with culverts.

Safety Initiatives

Provision of school bus pullouts for safe loading and unloading.

Removal of rock outcroppings near Elko and Yahk to improve sight distances.

Construction of long-load, left-turn facility at Elkford, Galloway and Highway 3 and 93.

Protecting the Environment

The arterial in Kimberley was enhanced with dead tree removal and seeding with scrub planting for steep-slope stabilization.

Public Consultation

Local residents requested and the Ministry complied with: Bultac Road, erosion protection beyond culvert outlet; Wycliff Cherry Creek Road, upgrade of 1 km; and reconstruction of an intersection in Lower Elk Valley to provide stopping areas for buses.

Selkirk District, Office located in Revelstoke

District Roadworks 1989/90

Revelstoke area, Camozzi Road: Reconstructed 2.74 km including culvert installation and paving.

Balfour/Kaslo, Galena Bay Highway: Reconstructed 4.63 km.

East of Golden in Kicking Horse Pass area, Mount Hunter Bridge: Concrete redecking and parapet addition.

West of Golden in Roger's Pass area, Quartz Creek Bridge: Concrete redecking and parapet addition.

Revelstoke area, Highway 1: Repaved 14.52 km using heater scarification method which involves recycling asphalt pavement.

Golden area, Highway 1: Repaved 4.04 km using heater scarification.

South of Revelstoke, Ward Road: New construction of 0.58 km dedicated right-of-way.

Safety Initiatives

Rock scaling, bolting and mesh installation along 1km of Highway 23 to prevent rock slides.

Replaced guardrail along 1.8 km of Highway 1.

Protecting the Environment

Fencing along 2.06 km of Highway 95 to keep livestock off the road.

CENTRAL/NORTH EAST REGION, Office located in Prince George

Development Approval Statistics for Central/North East 1989/90	
Controlled access permits to provincial roads issued	32
Ordinary access permits to provincial roads issued	417
Rezoning applications within 800 m. of numbered highways	94
Other permits for works within highway rights-of-way including utilities, pipelines, signs, parades, etc	511
Subdivisions (Final)	107
Lots created (Final)	160

Region Roadworks 1989/90

Vanderhoof, Nechako River Bridge: Two-lane bridge constructed to replace one-lane bridge and address safety and traffic flow concerns.

Prince George, Highway 97: Constructed an overpass (Continental Way) to address safety and traffic flow concerns.

West of Vanderhoof, Highway 97: Construction of an overpass (Engen Railway Overpass) to address safety and traffic flow concerns.

MacKenzie Blvd.: Four lane and curb and gutter along 2.48 km.

Red Rocky to 42 mile, Highway 97: Horizontal and vertical alignment along 19.95 km.

Pine Pass Bridges, Highway 97: Three new bridges to enable the highway to be relocated away from an avalanche hazard area.

Parkridge Heights, Highway 16: Repaved 8 km of road using heater scarification method which involves recycling pavement.

Parkridge Heights, Highway 16: Paved 12.5 km of road.

Highway 97 to Gantahaz Sub., MacKenzie Conn. 39: Paved 36.2 km.

Fraser River Bridge to Big Creek Road, Highway 20: Paved 20.6 km.

Highway 97 to Wingdam, Barkerville Highway 26: Recycled and repaved 39.6 km of road.

Quesnel area: Paved 34.6 km of Nazko, Blackwater and Parkins Road.

Anahim Lake to Nimpo Lake, Chilcotin Highway 20: Paved 34.45 km.

Plett Road to Widdis Road, Cariboo Highway 97: Recycled and repaved 19.7 km of road.

Telechick Road, Yellowhead Highway 16: Recycled and repaved 15 km of road.

Safety Initiatives

Prince George, Victoria Street: Upgraded six traffic signals to coordinate with city's and clear downtown congestion at intersections.

Prince George, Highway 16 & 97 junction: Added left-turn signals to alleviate traffic congestion and reduce potential hazard.

Joint project with Prince George, MacKenzie and Fort St. John: Installation of street lighting and signing between intersections at various locations to reduce the black hole syndrome.

Central Cariboo District, Office located in Williams Lake

District Roadworks 1989/90

Chilcotin-Bella Coola, Road 20: Reconstructed and widened shoulders from Towdystan to Anahim Lake.

Dog Creek Road: Reconstrurtion. Ongoing project.

Chilcotin-Bella Coola: Paved eastbound truck lane, 8.9 - 12.9 km.

Horsefly Lake Road: Reconstruction. Part of ongoing upgrade.

Big Creek - Willan: Realigned substandard curve to improve sight distance and safety.

Highway 20, Brown Bridge: Replaced old bridge with permanent structure.

Keithly Cr. Road., Duck Creek Bridge: Replaced log bridge with permanent structure.

Highway 20: Installed four cattle underpass structures.

Rip rap section along Bella Coola River to reduce erosion and washout potential to Highway 20.

Protecting the Environment

Rehabilitated Denny Pit #4702 to reduce potential leaching of salts into local wells.

North Cariboo District, Office located in Quesnel

District Roadworks 1989/90

East of Quesnel, Barkerville Highway: Widened approximately 20 km of shoulder to improve road for increased logging and tourist traffic.

West of Quesnel, Blackwater Road: Repaved 2.3 km between Quesnel Boundary and Yargeau Road.

South of Quesnel, Cariboo Highway: Installed left-turn slots to Dragon Lake, Durrell and Oslo Lake Roads to improve turning safety.

West of Quesnel, Garner Road: Constructed 3.2 km of new road, West Fraser Connector at Jack Pine Flats, to enhance safety and flow of logging traffic through a residential area.

West of Quesnel, Nazko Road: Shoulder widenings at various locations from Hayhill Road to Tibbles Road.

East of Quesnel, Gravelle Ferry Road: Major repairs done to the Gravelle Bridge for the safety of the travelling public.

West of Quesnel N. end of Nazko Road, Uichiniko Bridge: Replaced old bridge with new crossing structure.

82 km from Quesnel, Blackwater Bridge: Replaced old bridge with new crossing structure.

Safety Initiatives

Turn slots at various locations on Highway 97.

East of Quesnel, Barkerville: Realigned 0.05 km at Covey's Corner and rock cut to improve site distances and travelling safety.

Guardrail installation in various locations on Highways 97 and 26.

Protecting the Environment

Fencing along Highway 57 and Highway 97 to keep cattle off the road.

Removal of old buildings and clean up at the Marguerite Ferry site.

Public Consultation

Public input resulted in the relocation of Garner Connector Road to remove logging traffic from a residential area.

Robson District, Office located in McBride

District Roadworks 1989/90

Crescent Spur area, Loos Road off Yellowhead Highway 16: Upgraded to meet current demands of residential and logging traffic.

McBride, Sansom Road: Improved alignment and site distance at intersection of Jensen Road.

McBride area, Yellowhead Highway 16: Repaired Lamming slide area to provide a safe and smooth highway surface.

North of Blue River, Yellowhead Highway 5: Repaired Pyramid Slide area.

Safety Initiatives

Yellowhead Highway 5: Installed left-turn lanes to provide safe turning movements at intersections.

Installation of guardrail at bridge approaches on two bridges, Robson River and Six Mile Bridge to provide improved safety.

Yellowhead Highways 5 and 6, Tete Jaune, McBride and Albreda areas as well as from Albreda to McMurphy: Brushing to control vegetation and improve site distances and travelling safety.

Public Consultation

Meetings held with the Village of McBride resulted in the upgrade of frontage roads in the Village. The Ministry has now initiated survey and design work for future upgrading programs.

South Peace District, Office located in Dawson Creek

District Roadworks 1989/90

Bressey Creek to Muskeg Lake, Heritage Highway: Realigned and improved drainage along 23.6 km. Ongoing project to improve alignment and safety.

Jackfish Lake Road: Minor realignment along 5 km. Ongoing improvements and rehabilitation.

Taylor Hill slide area, Highway 97 North: Constructed a berm to stop the road from eroding. Ongoing project.

Dawson Creek, Dangerous Goods Route 94, Bypass route: Some new alignment and realignment of existing roads, reconstruction and construction of new or existing road, and property acquisition to provide a bypass (4.5 km) for safe transport of dangerous goods. Project ongoing to next year.

Intersection Development, Highway 97 at Highway 29 North: Long-haul intersection development including median and island construction, traffic light installation, left-turn lanes, and signing improvements.

Faust Bridge: Demolition of old structure and replacement with three-span timber, pile-trestle bridge.

Kennedy Bridge: Demolition of old structure and replacement with four-span timber, pile-trestle bridge.

March Bridge: Demolition of old structure and replacement with multi-plate structure.

District, Fencing Program: Ongoing project as part of yearly commitment to install fencing to keep cattle off the road.

Public Consultation

Dawson Creek, Highway 2 and 8th Street Intersection: Installed traffic islands at request of City.

Fort George District, Office located in Prince George

Ness Lake Road: Upgraded to current standards.

Upper Mud River Road: Upgraded to current standards.

Norman Lake Road: Reconstructed to improve access to provincial park.

Highway 16 east: Rock cut to increase sight visibility, and ditch widening.

Groveburn Road: Gravel pit access/alternate route.

John Hart Highway 97: Reconstructed intersection at Wright Road to improve sight distance.

Old Cariboo Highway: Shoulder widening.

Highway 97, North of Edric Road: Slide repair.

Hutton Road: Graveled and widened to upgrade route to current standards.

Shelley Road South: Realignment to improve travelling safety.

Protecting the Environment

Beautification program on Highway 97 at 66-mile gravel pit.

Safety Initiatives

Left-turn lanes installed at John Hart Highway and North Kelly Road intersection to address city and public concerns.

Left-turn lanes installed at Cariboo Highway and Holmes Road intersection to address public concerns for safety.

Islands and medians installed on Highway 16 and Aitcheson Road intersection to improve safety.

Public Consultation

Turnaround installed on Mitchell Road at request of Regional District.

Construction of wheelchair ramps on arterial routes cost shared with city.

North Peace District, Office located in Fort St. John

District Roadworks 1989/90

Fort St. John, Beatton River Highway, Road 101, Beatton River Bridge: Construction of new bridge.

Fort St. John: Beatton River crossing, new road construction (two lanes) from highway to bridge (2.5 km).

District: Gravel program includes farm access assistance because of the number of gravel roads in the North Peace District.

Won-O-Won, Upper Halfway Road: Multi-plate culvert installation to realign a dangerous corner and upgrade creek crossing.

Milligan Creek, Junction Road: Upgraded to resource road standard to assist commercial development in the area.

Taylor, Tank Farm Road: Upgraded to resource road standard to assist commercial development in the area.

Swanson Lumber Road and Highway 97: Reconstructed shoulder for improved safety.

Fort Nelson, Radar Road: Pavement preparation for subdivisions.

Buick Creek area: Bogg Creek slide repair.

Altona, Road 137: Access road construction to new gravel source for Ministry and industry use.

Pink Mountain, Upper Halfway Bridge: Replaced single-lane Bailey with two-lane structure.

Won-O-Won area, Cameron Bridge: Replaced wooden bridge to help ranchers and industry.

Nechako District, Office located in Vanderhoof

District Roadworks 1989/90

Tachie Road, American's Corner to Leo Creek Forest Road: Reconstructed and graveled 10.5 km.

Stella Road: The connection of the Stella East and West roads completed from km 12.37 to km 13.19, enabling the public to travel around Fraser Lake.

Sturgeon Point Road: Reconstructed 1.60 km at Maunders Road and graveled 8.2 km as part of commitment to improve this major feeder route.

Sackner Road: Reconstructed and graveled 3.20 km as part of ongoing program to enhance travelling safety and efficiency.

Fraser Lake, Airport Road: Reconstructed and graveled the first 1.6 km to eliminate poor vertical and horizontal alignments.

Stones Bay Road: Drilled and blasted rock to widen road and enhance travelling safety.

Corkscrew Road: Removed old wooden bridges and replaced with culverts plus ditched and regraveled 3.20 km.

Highway 16, Fort Fraser: Reshouldered Highway 16 from Nechako River Bridge to Willowvale. All public roads and driveways accessing this route were improved.

Nautley Road Interchange, Adjacent to Beaumont Park: Reconstructed to allow safer movement for proposed long-load logging trucks and RVs using the tourist facilities.

Upper Gaffney Bridge: Single-span bridge rebuilt in a new location at km 145 on Germansen Landing Road. Included was 1 km of approach road. All bridges from Vanderhoof North to Germansen Landing can now carry legal loads.

NORTH WEST REGION, Office located in Terrace

Development Approval Statistics for North West Region 1989/90	
Controlled access permits to provincial roads issued	93
Ordinary access permits to provincial roads issued	193
Rezoning applications within 800 m of numbered highways	39
Other permits for works within highway rights-of-way including utilities, pipelines, signs, parades, etc.	264
Subdivisions (Final)	40
Lots created (Final)	108

Region Roadworks 1989/90

East of Prince Rupert, Inver to Aberdeen, Yellowhead Highway 16: Constructed 4 km of rock fill road to lessen the incline and widened and realigned plus constructed a CNR track overpass to address traffic flow and safety concerns.

East of Prince Rupert, Khyex to Aberdeen, Yellowhead Highway 16: Constructed 5 km of rock fill to lessen the incline. Project addressed safety concerns and allowed the speed limit to be raised as it provided improved road width and alignment, and a CNR track overpass.

New Hazelton, Hagwilget Bridge: Structural rehabilitation to remedy deterioration of 60-year-old suspension bridge and allow the structure to handle larger, heavier trucks benefitting the logging industry.

Provincial Transportation Planning

Initiated corridor studies in the communities of Smithers and Telkwa to determine the long-term requirements of current highway corridors:

The Smithers Corridor Study has recommended a four-lane design to increase the inter-town movement of vehicles. This study is still in progress having been submitted to Smithers Council for discussion and public input. The Telkwa Corridor Study is still in preliminary stages and discussions are in progress with the Telkwa Council.

Contracted conceptual design plans for the Port Edward intersection to improve traffic flow.

Safety Initiatives

Commissioned Stellar Consultants to investigate options for increased avalanche control in Bear Pass on Highway 37A. The report identified short- and long-term options to enhance the existing Avalanche Control Program and, potentially, decrease road closure time.

Added school crosswalks at various intersections in the Thornhill area and paved a walkway for school-pedestrian traffic.

Protecting the Environment

East of Prince Rupert: A project to improve Highway 16 required the road be moved out covering part of the river. Two point six hectares of habitat were recreated to replace the 1.65 hectares of intertidal vegetation lost due to construction (1.6:1 compensation).

Lakes District, Office Located in Burns Lake

District Roadworks 1989/90

West of Burns Lake, Yellowhead Highway 16: Relocation of Meanwhile Corner to enhance travelling safety by relaxing the curve and reducing the grade over 1.5 km.

Francois Lake, Ferry Route: Installed heat-recovery equipment on the Omineca Princess Ferry.

West of Ootsa Junction, Ootsa Nadina Road: Installed a three-metre pipe to replace wooden bridge no longer considered safe.

Yellowhead Highway through Lakes District and Colleymount Road south of Burns Lake: Extensive ditching to ensure proper drainage is maintained and the road base is protected from water infiltration. Project includes landscaping.

Provincial Transportation Planning

Developed a plan to priorize rehabilitation projects on an ongoing basis to improve traffic flow and capacity within the District.

As part of long-term planning, contacted the Ministry of Forests and local sawmills to acquire five-year logging plans. District will then plan their rehabilitation program to identify improvements needed to safely handle this traffic.

Safety Initiatives

Removed rock outcropping along Yellowhead Highway 16 East to improve sight distance and reduce shading during winter months to lessen possibility of block-ice formation.

Constructed approximately 3000 metres of fencing along Yellowhead Highway 16 and minor roads to keep livestock off the road.

Protecting the Environment

Kept in close contact with the Ministry of Environment and the public in development of a gravel reserve area required to produce paving aggregates for the following year's paving projects.

Skeena District, Office located in Terrace

District Roadworks 1989/90

Queen Charlotte Isl., Yellowhead Highway 16: Ongoing project to provide erosion control to the east side of Graham Island where highway is endangered.

North of Terrace, Yellowhead Highway 16: Completion of a 1 km "S"-curve realignment to improve travelling safety.

North of Terrace, Kalum Lake Road: Minor repairs to Maroon Creek Slide area on Kalum Road.

Kitimaat Village, Kitimaat Village Road: Realigned 1 km as part of ongoing upgrade project .

Queen Charlotte Isl., Towhill Road: Reconstructed 3 km.

City of Prince Rupert, Yellowhead Highway 16: Reconstructed Five Corners in Prince Rupert to facilitate better traffic flow.

Queen Charlotte Isl., Yellowhead Highway 16, Lawnhill Bridge: Replaced Bailey bridge.

North of Terrace, Kalum Lake Road: Completed bridge approaches at Clear Creek.

Safety Initiatives

Constructed a drainage ditch across the top of a rock bluff along Yellowhead Highway 16 to eliminate water problems and ice overhang during winter months.

Constructed a truck pullout at Gossen Creek Subdivision.

Protecting the Environment

Constructed 1 km of fencing on the Queen Charlotte Islands and 2.5 km on Highway 16 west of Terrace to keep livestock off the road.

Stikine District, Office located in Dease Lake

District Roadworks 1989/90

Atlin Highway, Townsite to Yukon border: Reconstructed 5 km and widened 8.5 km including minor realignment and drainage improvements.

Iskut/Nine Mile, Highway 37: Areas with weak road base were repaired and drainage improved in preparation for sealcoating.

Burrage River/Morcheau Airstrip, Highway 37: Regraveled approximately 37 km.

North of Owegee Creek, Highway 37: Several existing rock cuts were drilled and blasted to improve sight distance and provide snow storage.

Iskut/Nine Mile: Approximately 50 km of miscellaneous roads resealed and 17 km sealcoated.

Safety Initiatives

Installed street lights in Dease Lake to illuminate intersections to provide a safer route for school children during winter months.

Public Consultation

Held a public meeting in Atlin with Headquarters and Regional Staff in attendance to discuss future upgrading of the Atlin Highway and townsite streets.

Bulkley Nass District , Office located in Smithers

District Roadworks 1989/90

East of Smithers, Greider's Corner: Improved horizontal alignment of 1.1 km to enhance sight distance and driving safety.

West of Smithers, Yellowhead Highway 16: Redesigned 1 km of road to relax two sharp corners.

Mudflat-Moricetown, Yellowhead Highway 16: Improved drainage and replaced rusted out culverts prior to repave.

East of Hazelton, Community of Two Mile: Upgraded roads and drainage.

VANCOUVER ISLAND REGION, Office located in Nanaimo

Development Approvals Statistics for Vancouver Island Region 1989/90	
Controlled access permits to provincial roads issued	144
Ordinary access permits to provincial roads issued	2097
Rezoning applications within 800 m of numbered highways	788
Other permits for works within highway rights-of-way including utilities, pipelines, signs, parades, etc.	123
Subdivisions (Final)	398
Lots created (Final)	1161

Region Roadworks 1989/90

Deep Bay, Highway 19: Reconstructed 3.8 km from two to four lane between Gainsberg Road and Cook Creek to improve travelling safety and efficiency.

Nanaimo, Highway 19 at Dorman Road: Installed drop curve and traffic signals to accommodate emergency vehicles crossing highway.

Deep Bay, Jamieson Road at Highway 19: Left-turn lane, acceleration and deceleration lanes, to accommodate school buses and local/tourist traffic.

Parksville, Highway 19: Englishman River Bridge to Finholm Street (3.26 km), upgraded to four-lane curb and gutter standard, with left-turn lanes, to handle increased traffic volumes.

Courtenay, Highway 19: From 29th Street to 20th Street, upgraded to four-lane curb and gutter standard with left-turn lanes to handle increased traffic volumes.

Lake Cowichan, Lake Cowichan Road: Four laned and curb and gutter along 0.5 km. Repaving of 1.2 km of South Shore Road was included.

Sooke, Highway 14 (Sooke Road): Construction commenced on four laning of 3.5 km in the Dewdney Flats/Awsworth Road area.

Fanny Bay, Highway 19: Realigned 0.7 km to improve travelling safety.

Port Hardy, Highway 19, Koegh River Bridge: Replaced a one-lane structure with a two-lane concrete bridge on an improved alignment (1.2 km of highway reconstruction). Project eliminated traffic control signals on the old structure.

Between Alberni and Ucuelet, Highway 4, Canoe Creek Bridge: Replaced old, wooden structure with a concrete bridge on an improved alignment (0.5 km of highway reconstruction).

Port Hardy, Port Alice Road, Marble River Bridge: Replaced a one-lane, temporary crossing structure with a steel bridge on an improved alignment (0.6 km of highway reconstruction).

North of Campbell River, Highway 19, Nelson Bridge: Design and reconstruction of bridge.

East of Gold River, Highway 28, Dirty Creek Bridge: Replaced old log stringer bridge.

North of Campbell River, Highway 19: Widened and resurfaced between the pulp mill access and Race Point Road. Included paved shoulders.

Durrance Lake Road: Began construction of 4.1 km of new two-lane road to provide access to Willis Point area.

Protecting the Environment

Miscellaneous roadside development to enhance aesthetics of region highways including clean up of Cassidy Rest Area.

Floral displays along Highway 17 in Sidney.

Complete landscaping of widening project along Highway 1/Stewart Ave to the ferry terminal in Nanaimo.

Landscaping of curb and gutter project along Highway 19 in Parksville.

Provincial Transportation Planning

Planning commenced in the "Western Communities" to resolve traffic problems.

Public Consultation

Public meetings held in conjunction with design work for the following projects:

Nicol Street four laning in Nanaimo, relocation of Durrance Lake Road near Victoria; and Port Alberni curb and gutter.

South Island District, Office located in Victoria

District Roadworks 1989/90

South of Duncan, Koksilah Road: Upgraded 1 km to accommodate increased traffic volume.

South of Duncan, Fisher Road: Upgraded 1 km to increase capacity and lower maintenance costs.

Lake Cowichan, South Shore Road: Realigned 3 km to increase capacity.

East Sooke, Gillespie Road: Realigned, widened and paved 2.2 km to enhance traffic flow from East Sooke to Highway 14.

Port Renfrew, Harris Cove Bridge: Replaced wooden beams with steel.

Protecting the Environment

Planted wildflowers along Kelvin Creek Road.

Landscaped approaches to Chemainus Bridge.

In close consultation with Ministry of Environment on all bridge projects.

Redesigned Village Bay Road to accommodate and not take down a heritage tree.

Hydroseeding and litter pick-up throughout district.

Monitor and control of corrosive materials such as salt used by maintenance contractor.

Public Consultation

Initial design for Hannington Bridge changed due to public input.

Sooke Lake Road closure for Water District put on hold after public input.

Regular liaison with transportation committees on Gulf Islands.

Transportation Planning

Shoulder widening along various routes to accommodate bicycles.

Route planning and traffic counts along various routes.

Ongoing consultation with municipalities in district.

Safety Initiatives

Signalized Koksilah/Wilmet intersection.

Installed median barrier on Pat Bay Highway.

New crosswalks and signing at elementary schools.

Shoulder widening for pedestrian use along various roads in district.

Other

Chipsealing on Highway 14 completed to further enhance tourist movement to West Coast. This low-cost type of surface treatment provides a better surface than straight gravel, reduces maintenance costs and eliminates the dust problem.

Central Island District, Office located in Nanaimo

District Roadworks 1989/90

Nanaimo, Clark Drive: Extended road 0.4 km to connect with Aulds Road and provide for safer access to a residential area.

Between Nanaimo and Parksville, Nanoose/Schooner Cove Area: An ongoing program began to rebuild roads into a fast developing area with new golf course to handle the increased traffic volumes. This year 0.7 km of Stewart Road and Davenhame Road and 0.45 km of Powder Point Road were reconstructed and paved.

Nanaimo, Yellow Point Road: Removed a sharp, hazardous corner.

Qualicum Beach, Highway 19/Bennett Road: Left-turn lanes constructed on Highway 19 to improve turning safety.

Port Alberni area, Local Roads: Paved 10.4 km to provide better service to the public and reduce maintenance costs.

Errington area, Morrison South Bridge: Reconstructed and relocated to a new, safer location.

District: Chipsealed 20 km during year. This low-cost type of surface treatment provides a better surface, reduces maintenance costs and eliminates the dust problem.

Transportation Planning

Widened and repaved 1.32 km of Berry Point Road on Gabriola Island to accommodate the number of bicycles and pedestrians using the road in the summer. A paved shoulder was placed on one side to increase the safety for all road users.

Safety Initiatives

Some rock outcroppings were removed on Lasqueti Island in an ongoing program to increase safety on Island roads.

As part of an ongoing program to increase intersection safety in the region, improvements were made to the McKibbon/Errington Road intersection and the Superior/Van Den Hoek intersection and left-turn lanes were constructed on the Island Highway at Bennett Road south of Qualicum.

Public Consultation

The design for adding a paved shoulder to Berry Point Road on Gabriola Island was revised after a lengthy series of consultation with the Islands Trust and adjacent landowners.

North Island District, Office located in Courtenay

District Roadworks 1989/90

Courtenay, Island Highway, Ships Point Road: Left-turn lanes to handle increased turning movements.

Cortes Island, Seaford Road and Gorge Harbour Road: Granular surfacing and paving 2.3 km.

Quadra Island, Hyacinth Road: Reconstructed 2.6 km.

Courtenay, Hodgins Bridge: Replaced with culvert.

Safety Initiatives

Paved walkways for school children.

Widened and paved shoulders on collector roads for safety of motorists, bicyclists and pedestrians.

Constructed left-turn lanes at Island Highway and Ships Point Road.

Protecting the Environment

Coordinating project construction and instream works with environmental agencies.

On couple of projects, undertook stream bed enhancement and protection in conjunction with project construction.

APPENDIX F

REHABILITATION PROCEDURES EXPLAINED

The following are elements of the Ministry of Transportation and Highways rehabilitation program.

Roads

Resurfacing - Application of a new layer of asphalt pavement over an existing road structure.

Sealcoating - Low-cost, effective means of extending the life of asphalt pavement and making existing gravel roads into hard-surface, all-weather roads. The work involves the application of sand seals, graded aggregate seals and chip seals as required. Special emulsions are applied to rejuvenate older dried-out pavements.

Minor Road Upgrading - Work required to increase the capacity and/or safety of an existing facility by selective localized improvements. Work includes shoulder widening, paving gravel roads, truck lane construction, widening one-lane bridge to two, etc.

Roadside Development

Improvement of facilities, aesthetics and safety concerns pertaining to the highway transportation system. This includes improvement and development of rest areas, landscaping for all major projects, arterial highway beautification, vegetative management, erosion control and research.

Bridges

Earthquake retrofit - Upgrading existing bridges which are not designed to meet current earthquake codes to improve their strength and their effectiveness during an earthquake.

Paint - Major repainting of existing steel bridge structures.

Deck Resurfacing - Repaving and redecking existing concrete bridge decks.

Structural Elements - Inspection and repair as well as replacement of structural elements due to normal aging.

Replacement - Construction of smaller, two-lane bridges and/or placement of culvert systems to replace old bridges. Larger bridges are considered upgrading projects and are funded under the Capital Construction Program.

Safety

Safety Projects - Involve the assessment of traffic-accident data, identification of problem areas and recommendations for improvements in highway design, signing and speed limits. Works include intersection improvements, general safety works (ie median and bridge end treatments and sight distance improvements), roadside hazard elimination, school route improvements, demonstration projects (i.e. special crosswalks) and road safety education.

Fencing - Installation of suitable barriers along highway right-of-way designed to restrict the access of livestock and wildlife onto the road.

Guardrail and Median Barrier Installation - Placement of devices designed to contain and/or divert any errant vehicle leaving the highway.

Rock Stabilization

The process by which the natural forces of erosion and stress relief on existing rock slopes are controlled to reduce the probability of unexpected and dangerous rock slides. The most

common techniques utilized include excavation of hazardous rock slopes, slope reinforcement such as rock bolting as well as redirection of falling debris so that it does not fall on the highway and reduction of groundwater pressures to lessen the affects of stress relief and erosion.

Electrical

Replacement or upgrading to more sophisticated signals/controllers and systems, together with new or replacement lighting and the addition of changeable message signs.

Ferries

Certification Retrofit - Ongoing upgrading of inland ferries and associated systems to comply with Canadian Coast Guard Regulation and Ministry policy and standards. These works include docking inspections; cleaning, painting, refurbishing of main and auxiliary machinery; upgrading appropriate systems to natural gas; inspection of life-saving and fire-fighting equipment and procedures for vessel and crew certification.

Dock and Shore Facilities - Repair and replacement of piles, dolphins, ramp structures, lifting equipment and port facilities.

APPENDIX G

LIST OF MAINTENANCE SERVICES

Surface Maintenance

- Highway pavement patching
- Pavement crack sealing
- Dust control/stabilization
- Highway shoulder maintenance
- Pavement surface cleaning
- Highway structures maintenance
- Curb and barrier maintenance
- Highway surface treatment
- Gravel surface grading
- Highway surface graveling
- Road base maintenance
- Rock and debris removal
- Minor pavement line marking

Drainage Maintenance

- Ditch and water course maintenance
- Streamtrol and bank maintenance
- Drainage appliance maintenance

Winter Maintenance

- Highway snow removal
- Roadside snow and ice control
- Highway condition reporting services
- Winter abrasives and de-icing application
- Weather monitoring services

Roadside Maintenance

- Roadside mowing
- Roadside brushing
- Roadside litter collection
- Rest area maintenance
- Roadside landscaping maintenance
- Roadside fence maintenance

Traffic Maintenance

- Sign and delineation maintenance
- Highway traffic control maintenance
- Highway traffic patrol
- Movable bridge opening
- Bridge/tunnel monitoring services

Bridge Maintenance

- Bridge wearing surface maintenance
- Bridge structure cleaning
- Bridge drain and flume maintenance
- Bridge joint maintenance
- Bridge bearing maintenance
- Bridge dolphin and fender maintenance
- Bailey/Acrow bridge maintenance
- Minor bridge structure painting
- Steel deck maintenance
- Concrete surface treatment
- Timber bridge redecking
- Timber truss bridge maintenance
- Timber substructure maintenance
- Bridge piling maintenance
- Log string bridge maintenance
- Ballast, wing, crib and retaining walls
- Timber surface treatment
- Steel multi-plates, headwalls and bin walls
- Bridge railing maintenance
- Movable bridge maintenance
- Floating bridge maintenance
- Bridge traveller maintenance
- Tunnel and snowshed maintenance

Emergency Maintenance

- Flood control and washout response
- Earth and rock slide response
- Highway accident response
- Snow avalanche response
- Structural damage response
- Bailey/Acrow emergency installation

Inspection Maintenance

- Highway inspection
- Bridge inspection

APPENDIX H

AIR TRANSPORT ASSISTANCE PROGRAM 1989/90 GRANT SUMMARY

Municipality	Project	Amount
ALERT BAY	Complete new fuel system installation	12,500
ANAHIM LAKE*	Runway crack filling	9,000
ANAHIM LAKE*	Runway snow clearing	5,000
BARKERVILLE	Reactivate airport	100,000
BOB QUINN	New airstrip for resource development	1,757,500
CACHE CREEK	Runway crack filling	10,000
CHETWYND	Runway crack filling/building repairs	44,500
KASLO	Complete runway paving project	52,000
KASLO	Airport development plan	10,000
LILLOOET	Runway crack filling	19,000
MASSET	Complete runway paving project	283,000
MASSET	Airport development plan	15,000
MERRITT	Airport development plan	10,000
NAKUSP	Detailed engineering for access road	8,000
108 MILE*	Install electronic navigation aids	225,000
OSOYOOS	Grade and compact new runway	11,000
PRINCE RUPERT**	Contribute to Digby Isl. ferry study	25,000
PRINCE RUPERT	Construct new medevac helipad	300,000
QUALICUM	Develop new taxiway and lease area	250,000
	19 Grants Totalling	**3,146,500**

* Grant actually awarded to Cariboo Regional District

** Grant actually awarded to Skeena Queen Charlotte Regional District

APPENDIX I

SECONDARY HIGHWAY PROGRAM GRANTS

		Funds approved	
Municipality	Road Name	Capital	Maintenance
Abbotsford	No. 3 Road	20,000	2,400
Anmore	East Road & Sunnyside Road	17,000	4,800
Armstrong	Pleasant Valley Road & Smith Drive		6,684
	Armstrong/Salmon Arm Road		3,893
Burnaby	North Road (west half)		7,130
Campbell River	Brewster Lake Road		3,996
Castlegar	Columbia Avenue	31,250	24,860
Central Saanich	Keating Cross Road		13,640
Chase	Shuswap	80,499	8,046
	Pine Street	9,000	3,000
Chilliwack	Yale Road. East		4,966
	Vedder Mtn., Yarrow Cent. & Dyke Roads		8,571
	Vedder Road. & Cultus Lake Road		7,860
	1st Avenue & Broadway		2,602
Colwood	Metchosin Road		8,448
	Jacklin Road		442
	Goldstream Avenue		1,651
Comox	Comox Avenue & Anderton Road		2,320
	Comox Avenue, Pritchard Road, Balmoral Avenue & Port Augusta Street		2,225
Coquitlam	North Road (east half)	20,500	2,361
	Clarke Road		6,632
Creston	Erickson Street 17th & 16th Avenue		1,600
Cumberland	Cumberland & Fourth Street		5,227
	Dunsmuir Avenue & Royston, Suttons & Comox Lake Roads		7,390
	Bevan Road		1,827
Dawson Creek	Eighth Street		4,800
Duncan	Tzouhalem Road	12,500	4,840
Enderby	Cliff Street		313
Esquimalt	Tillicum Road	4,700	800
Fruitvale	Columbia Gardens Road	68,380	3,400
Gibsons	Gower Point Road	12,720	3,960
	North Road		1,560

Municipality	Road Name	Funds approved Capital	Maintenance
Hope	Kawkawa Lake Road		696
	Sixth Avenue		272
Houston	Butler Ave., Riverbank Drive,		
	Poplar Street & Omineca Way	86,088	9,240
Invermere	Westside Road, 13th & 7th Avenue,		
	13th, 5A, 7th & 3road Street		8,000
Ladysmith	Chemainus Road		3,200
Langley City	200th Street (Carvolth Road)	55,350	11,215
Lumby	Shuswap Avenue	12,886	6,120
Maple Ridge	Dewdney Trunk Road.		
	& 224th Street	463,691	66,000
	232nd Street & Fern Crescent		20,600
McBride	1st Avenue & Main Street	3,723	5,140
Metchosin	Metchosin, Happy Valley,		
	Rocky Point & East Sooke Roads		17,600
Mission	Dewdney Trunk Road	176,711	37,800
	Shook Road	1,296	
	Grand Street, 7th Avenue & Cedar Street		11,620
Nanaimo	Esplanade & Front Street		1,424
New Westminster	Stewardson Way, Queens Avenue,		
	12th Street, Royal Avenue, McBride Blvd.,		
	Columbia Street & Brunette Avenue	443,335	34,960
North Cowichan	Chemainus Road		15,500
	Oak Street		5,200
North Saanich	McTavish Road		1,871
N. Vancouver (D)	Mount Seymour Parkway	472,800	4,000
Oak Bay	Cadboro Bay Road	3,187	
	Cedar Hill Cross Road		1,272
Oliver	7th Street. & McKinney Road	3,000	2,320
100 Mile House	Horse Lake Road	23,660	910
Osoyoos	89th Street. & 64th Avenue		2,296
Penticton	Penticton/Naramata Road	20,000	11,000
	Skaha Lk. Road, Yorkton Avenue,		
	S. Main Street., & Lakeside Road	90,275	11,720
Pitt Meadows	Harris Road	112,830	8,540
	Hammond Road		2,460
	Harris Road		5,020
	McNeil Road		4,820
	Old Dewdney Trunk Road		6,680
Port Hardy	Airport Road (Byng Road)	61,569	4,200